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OF THE

Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

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Volume XV

JANUARY, 1918

Number 1

E. J. GOODWIN, M.D.,
EDITOR

PUBLICATION COMMITTEE } W. H. BREUER, M.D. Chairman
S. P. CHILD, M.D.
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ORIGINAL ARTICLES

THE CONTROL AND TREATMENT OF CRIMINAL ABORTION *

RAYMOND M. SPIVY, M.D.
ST. LOUIS

In looking over the literature on abortions, it was surprising to find that practically every portion of the civilized world was confronted with the problem of an increase in the number of miscarriages in the early months of pregnancy, most of which were due to instrumental interference. From all parts of Europe and from North and South America comes the same general cry of a falling birth rate due to this cause.

It is surprising that the medical world is seemingly so slow to recognize the true significance of these reports, which is undoubtedly a popular expression of the feeling of civilized communities toward the matter of birth control. To refuse to admit this obvious interpretation or to try and flat footedly combat it is the sheerest folly.

The problem of fundamental importance in any disease is the problem of its cause. We have the abortion problem with us because in this day of increasing efficiency men and women have learned that large families do not necessarily make for the best in human achievement, that the female of the species is more than a mere breeding machine, and that each and every individual has the right to exercise control over his or her own life and affairs.

If the medical world would meet this popular demand for limited families in a conciliatory manner, which it must do sooner or later, and cease trying to check this modern movement by making senseless laws which are impossible of enforcement, we would see intelligent progress of the abortion problem.

As long as the old dictum holds good that

it is not the function of the physician to give advice on the subject of limitation of families, excepting in the case where the physical condition of the woman warrants, just so long shall we have the present or worse conditions as regards abortions confronting us.

Abortions are due to the lack of knowledge of the general public of any method by which conception may be prevented, and it is futile to try to remedy the trouble by striking at the superficial evidences, rather than by squarely facing the fact and getting at the fundamental root of the present evil.

As long as the general public knows of no other way of preventing an increase in their family which they do not want, just so long abortions will increase despite all laws and regulations. Impart the necessary information as to the prevention of conception and the percentage of abortions will decrease rapidly. We thus have in our power the saving of many mothers' lives useful to the community, which would otherwise be sacrificed.

When we consider that the great majority of abortions are carried out by the women themselves without the aid of the second party to the act; when we consider that the entire sexual experiences of the mother are intimately related to this act, we cannot fail to see how unapproachable the entire subject is except from a broad aspect of liberal views of the general social conditions by which the families in the various countries are surrounded.

We all know that women who object to having children have such a multitude of expedients to cut short their pregnancies, and frequently conceal their methods so carefully that our estimates as to percentages are not as high as they would be if the truth were known.

So, before proceeding to the discussion of the agencies for the control of this problem, it will be of some value to review the literature on this subject and at the same time to look over some of the tables made from a previous statistical study by the writer of 250 abortions entering

* Read at the 60th Annual Meeting of the Mo. State Medical Association, Springfield, May 14-16, 1917.

the gynecological services of the St. Louis City Hospital in the last two and one-half years.†

The proportion of abortions in general to pregnancies in hospital and dispensary statistics usually runs from one to three.

TABLE 1.—CONFESSEDLY CRIMINAL, INTENTIONAL AND OTHERWISE, IN TWO HUNDRED AND FIFTY ABORTIONS

Confessedly criminal, 84—33 per cent. (Instrumental and otherwise)	41 complete 43 incomplete Deaths, 15 or 18 per cent.	Relative to race: 2 out of 33 colored, 6 per cent. 82 out of 217 whites, 38 per cent.	Relative to marriage: 63 married, 198 —32 per cent. 21 single, 52—40 per cent.	Self-induced, 62—	Instrumental ... 32
				24.8 per cent. ...	Drugs 20
				Method not known, 12—	Both 10
				4.8 per cent.	
				Induced by physician or midwife, 10—	Instrumental ... 9
4 per cent.	Instrumental and drugs 1				

third month. In my series it was found (Table 1) that eighty-four, or 33 per cent., were confessedly criminal. One realizes that in the study of so small a number of cases percentages may be misleading, and while my findings, as you will see, are higher than the trend of most of the available statistics, it does not necessarily mean that they should not immediately become of some value in gaining a proper perspective of the increasing frequency of criminal abortions.

Treube and van Tussenbroeck⁶ of Amsterdam estimate that criminal abortions of that city at 10 per cent., but other equally reliable authorities of the same city place it at 30 per cent.

Titus⁷ in a study of 274 abortions occurring in the obstetrical ward at Johns Hopkins Hospital found 15 per cent. were criminally induced.

Taussig⁸ in his study of the clinical records of 600 abortions treated in the gynecological department of the Washington University Hospital reports 6 per cent. confessedly criminal.

In comparison with my findings these figures are low, but one must take into consideration in the first place the fact that the patients seen in the Washington University Hospital and the Johns Hopkins Hospital are of an entirely different type from those seen in the gynecological and obstetrical department of the St. Louis City Hospital. Secondly, my work was done eight years later than theirs, proving certainly to

TABLE 2.—CONFESSEDLY CRIMINAL INSTRUMENTAL CASES IN 250 ABORTIONS

Confessedly Criminal, 52—20.8 per cent.	Physician or midwife 10
	Hairpin 3
	Slippery elm 20
	Catheter 10
	Sponge 2
	Pencil 2
	Rubber tubing 1
	Pen holder 1
	Hat pin 1
	Wire 1
Injection of phenol 1	
Complete 23	
Incomplete 29	
Fever 42—80.1 per cent.	
Deaths 14—26.9 per cent.	
Causes of death.....	Septicemia 5
	General peritonitis 6
	Shock 1
	Septic endometritis 2

TABLE 3.—ANALYSIS OF 28 (11.2 PER CENT.) COMPLICATED SEPTIC ABORTIONS OUT OF 250 ABORTIONS

Treatment by operative measures, 12	
Fever, 99—101=4	
Fever over 101=8	
Duration of Fever.....	1—9 days 6 10—19 days 3 20—29 days 1 30—39 days 2
Pulse under 120=8	
Pulse over 120=4	
Causes of Abortion.....	{ Spontaneous, 4 Criminal, 8 } Instrument, 7 Unknown method, 1
Deaths, 4—33 per cent.	
Causes of Death.....	{ Septic endometritis, 2 General septicemia, 2

Treatment by conservative measures, 16	
Fever, 99—101=7	
Fever over 101=8	
Afebriles, 1	
Duration of fever	{ 1—9 days 8 10—19 days 5 20—29 days 2 30—39 days 1
Pulse under 120=7	
Pulse over 120=9	
Causes of Abortion.....	{ Spontaneous, 4 Criminal { Instrumental, 9 Drugs, 1 Method unknown, 2
Deaths, 10—62 per cent.	
Causes of Death.....	{ Septicemia, 4 Septic endometritis, 4 Peritonitis, 2

† For lack of space only 3 out of 12 tables are here shown.

Winter¹ reports 9,672 to 24,903 = 1 to 2½; Orthman² reports 7,268 to 16,153 = 1 to 2.2; Bleichroeder³ reports 1,209 to 3,767 = 1 to 2.2; Spivy⁴ reports 250 to 800 = 1 to 3.

This means that in round numbers almost one third of all conceptions do not produce a living child, and according to Grunspan⁵ 80 per cent. of all these abortions do not pass the

some extent that criminal abortions are surely on the increase.

Rupp reports abortions in general at 6.4 in 1904 as against 14.7 in 1912 in his clinic in Breslau.

Bleichroeder⁹ in a study of all the abortions treated in the different city hospitals of Berlin from 1903 to 1913 shows the tremendous increase of this condition. He also shows by a

1. Winter: Zentralbl. f. Gynäk., 1911, No. 15.
2. Orthman: Ztschr. f. Geburtsh. u. Gynäk., 1911, lxx, p. 679.
3. Bleichroeder: Berl. klin. Wehnschr., 1914, li, No. 10.
4. Spivy: Jour. Missouri Med. Assn., xiii, No. 10.
5. Grunspan: Deutsch. med. Wehnschr., 1913, No. 39.

6. Treube and van Tussenbroeck, Nederl. Tijdschr. voor Geneesk., i, No. 15.
7. Titus: Am. Jour. Obst., June, 1912.
8. Taussig: The Prevention and Treatment of Abortion, Mosby Co., St. Louis, 1909.
9. Bleichroeder: Ibid.

study of 1,000 hospital cases of married women admitted for all kinds of conditions that the young women of today abort three times as often as those of a generation ago.

It is likewise of interest to observe into which of the two divisions abortions fall—married or unmarried. I think that almost every one who has considered the question at all will agree that a great majority of unmarried women are virgins, and only a small percentage fall by the wayside, and again only a small percentage of these become pregnant. Knowing this, it would seem rather far fetched to think of the abortion problem in terms of the illegitimate child. Rather would it seem logical to consider abortions in that great mass of women who rightly become pregnant in wedlock, and who do make up the majority of cases with which we have to deal.

It is a well known fact among gynecologists that abortions on the whole are far more frequent in the married than unmarried women, and according to Titus,¹⁰ more than one-third of all criminal abortions are among married women.

We do, of course, recognize the illegitimate pregnancy as a factor, but must of necessity relegate it to secondary importance when the preceding statement is taken into consideration.

As Table 1 shows, the percentage of criminal abortions among the negroes is strikingly small; only 2 out of 33 colored women (6 per cent.), as compared with 82 out of 217 white women (38 per cent.). These percentages correspond fairly well with the findings of other men.

It therefore cannot be too strongly emphasized that it is the married women, and especially the white married women with large families, as Rupp¹¹ has shown, who furnish the greatest problem in this sociological question.

Of the 84, or 33 per cent., confessedly criminal in my study, 62 were self-induced, and in only ten instances did the patient acknowledge the assistance of a physician or midwife. These findings would seem to confirm the deliberations and conclusions of the Nieder Rheinsicher West Fallischen and other obstetrical societies of Germany, who, in a symposium held since the European war started, on the causes of falling birth rate, specifically pointed out that the majority of women bring about the abortion themselves.

Of this confessedly criminal group of 84 coming under my observation, 52 had used some instrument to bring on the miscarriage, the most popular being the slippery elm stick and catheter. Out of the entire 250 abortions only 43 were free from fever during their stay in the hospital.

The appalling frequency of sepsis and septic complications, with its high mortality following this criminal interference of pregnancy, is one of the most serious factors confronting the medical world of today, for by this criminal interference not only is the child lost, but the mother as well. Rupp¹² believes that a mortality of 50 per cent. in these complicated septic cases is a conservative estimate, Maygrier,¹³ from his clinic in France, reports 56 per cent. mortality. This is certainly a marked contrast to the low mortality seen in spontaneous abortions.

Treatment.—I wish now to call your attention to the treatment of septic abortions, and shall briefly present my views on the present practical management of this condition.

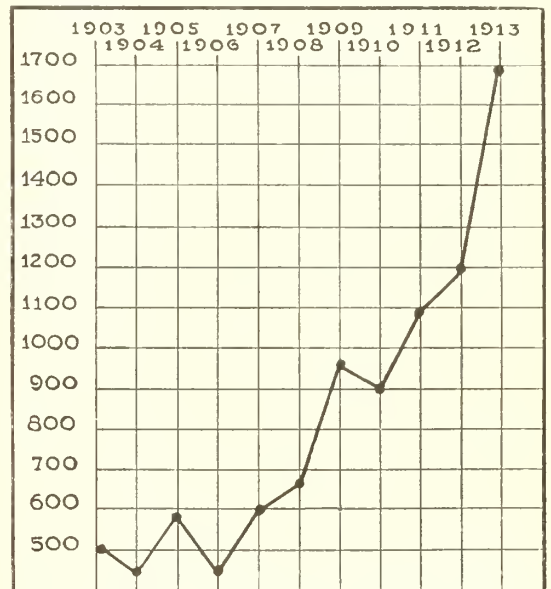


TABLE SHOWING INCREASE OF ABORTIONS IN BERLIN HOSPITALS FROM 1904-1913

The treatment of criminal abortions is at best discouraging, for, as you have seen, the mortality, regardless of any therapeutic measures employed, is very high. Where instrumental interference had been resorted to, the majority of cases were septic or had septic complications on admission or shortly afterwards; and in a few instances uterine perforation had to be dealt with.

Our motto is that of "Noli me tangere" if possible, for by this method we hope to save more lives and cause less post-abortive complications. When active interference is resorted to as a routine such happy results will certainly not be gotten. This statement is not to be misconstrued, for in a limited number of cases operative interference will be found necessary.

10. Titus: *Ibid.*
11. Rupp: *Ibid.*

12. Rupp: *Ibid.*
13. Maygrier: *L'Obstetrique*, July 4, 1902.

If a patient comes in with no evidence of sepsis or with only slight bleeding she is treated expectantly. In cases where the bleeding is any way alarming, she is, after the proper preparation, packed vaginally and ice-bags are used locally, together with some ergot preparation either by mouth or subcutaneously.

An incomplete septic abortion is a very serious condition, and the curette should never be used. If it seems wise to do anything at all, under strict asepsis and preferably without anesthesia, the cervix and vagina should be carefully and tightly packed with gauze. The patient is then put back to bed and ice bags are applied locally. At the end of twenty-four hours this packing should be removed, and in the majority of instances it will be found that the cervix is much softer and open. The dilatation with the finger may then be safely attempted, and is, as a rule, fairly easy. In infected cases the essential thing is to get rid of the infectious material by emptying the uterus. This should always be done as gently as possible, and, as I have before said, preferably without anesthesia. Under strictly surgical asepsis the cervix is dilated with the finger, using first the small, then index and thirdly middle. Tenaculi for grasping the cervical lip, as well as metal dilators, should not be used. In the first six weeks if the ovum is retained remove with the finger. If the placenta is retained, removal with ovum forceps under the guidance of the finger if it cannot be brought away with the finger alone. If there is a retention of placenta pieces, then lightly curet with a dull curet, or wipe out the uterine cavity with a piece of gauze on a sponge forceps. We never repack the uterus unless there is an unusual amount of bleeding. A hypodermoclysis during the operation helps considerably if the patient is not in good condition.

Winter¹⁴ believes that when a septic abortion is recognized it must first be determined whether or not the infection has extended beyond the uterus before active treatment is instituted. If confined to the uterus the physician should determine by bacteriological examination what the predominating micro-organism is. If it should prove to be the hemolytic streptococcus he advises against any local intervention, but, on the other hand, to treat the patient along general lines to increase her power of resistance, in the expectation that the infection will be overcome by local reaction. Ergotin and ice-bags he advises to limit absorption by firm contractions and at the same time favor expulsion of the remnants of the fetus.

Personally, I believe that timely digital curetting is wise and perhaps necessary in all cases.

Again coming back to the method of controlling abortions, I wish to say that I think the efforts in the past to limit its spread have been directed primarily along four lines: (1) Legislative measures; (2) social reforms; (3) education; (4) moral agencies. For a discussion of these subjects I can refer you to a paper by F. J. Taussig.¹⁵

One thing must be clearly recognized in finding a solution for a problem of so vast a scope, and that is this unfortunate state of affairs will never be entirely stopped by merely making punishable by law the various methods of producing abortions. In every country in the world it has been tried and found to be a dismal failure.

These women need special care and not punishment, something that cannot be said of the professional abortionist. Some help is surely to be brought about by bettering social conditions, the making easier of the illegitimate pregnancies and birth and the providing of institutions for the raising of these unfortunate children.

However, we have already pointed out that this is only one small factor in the problem, and that our efforts must be directed toward bringing about, first, an awakening of the public conscience to the seriousness of this question, and secondly, giving a freer choice to the individual in regulating the size of his family. The second factor is perhaps the most important, for by its judicious and restricted use more can be accomplished in a short space of time than has been accomplished by the various laws that have already been enacted. A glance at the statistics presented, showing an ever increasing abortion rate, is proof positive of this assertion. Make it clear to the people that life begins with conception and that a criminal abortion is nothing more nor less than murder of the unborn child. Do not confuse this suggestion with the prevention of conception, which has nothing to do with this, because where prevention is used no life has existed. The removing of antiquated laws making it a crime for a physician to advise his patients how to prevent conception, or, in other words, government authorization of birth control with suitable restrictiveness, is advocated. By this means we put into the hands of these people especially fitted for the task a method by which humanity as a whole can be benefited.

In closing, let me again say that the question of abortion and birth control are unquestionably intimately associated. The alarming increase of abortions is the natural result of a striving for the limitation of families; this no doubt being due to a great extent to the present economic situation, which makes large families an impossibility for the individual with a limited income.

14. Winter: *Med. Klin.*, April 16, 1911.

15. Taussig: *Interstate Med. Jour.*, 1916, xxiii, 772-778.

The prevention of abortion means not only a decrease in the waste of human life, but an actual conservation, and this prevention can be brought about to a great extent by giving into the hands of the laity a safe means of limiting her offspring.

Humboldt Building.

DISCUSSION

DR. EDGAR F. SCHMITZ, St. Louis: Dr. Spivy is to be complimented on his paper even though it may seem radical to some. He is especially to be commended on the enormous amount of work which he has done in getting together these statistics.

As the doctor has so clearly pointed out, many suggestions have been made to limit the abortion evil. In some countries the women themselves and in almost all countries the doctors and midwives who perform the abortions are subject to the penal code. Foundling homes are established, mothers' pensions have been given—sometimes pensions for large families. All these things have been tried in various countries of the world, and they have every one failed. The statistics of almost any country show that the results of all sociologic legislation are nil and the abortion problem goes right on and is growing.

This is perhaps due to the fact that we still think of the abortion problem in terms of the illegitimate child, which is the smallest percentage in the question, as has been pointed out.

It is the married woman who rightfully begets a child in wedlock who most often seeks relief by this method. Punishment is never a deterrent of crime, as we have acknowledged in our own state recently when we abolished capital punishment for murder because we have found that murders do not decrease simply because we hang a man. The criminal who has determined to commit a criminal act, be it murder or abortion, pays no attention to law. We cannot force people to have what they do not want, and so they turn to the production of an abortion to get rid of the product of conception.

I cannot agree with Dr. Spivy in not using an anesthetic while cleaning out the uterus. I do not believe that you can properly clean out a uterus where the woman is in pain or where the parts are rigid, without an anesthetic, and, unless the woman is moribund, an anesthetic should be given.

Returning to the subject of birth control, we must recognize that birth control is a potent factor in this question of abortion, and if the medical profession will look at the matter with a more open mind we will undoubtedly save many women who otherwise would die from septic abortion.

DR. B. G. HAMILTON, Kansas City: I had occasion to look up the statistics a short time ago on the birth rate and I found that the birth rate is stated to have fallen from about six and a fraction to about two and a fraction, which is appalling. I confess that I am forced to take a different view of the question than the essayist has. I am convinced in my own mind, from a number of cases that I have talked over with doctors, that if doctors would only make these women understand that they would not help them through, that if they came to them after an abortion they would not get help but would die, there would be not so many abortions performed. I am also convinced that at the base of moral law must be our religious law. I have in my practice a great many Catholics—I am a Presbyterian myself—and you will find that the majority of Catholics have large families. I have not had more than three abortions and one criminal abortion in twelve years in Catholic families. They have large families and they take care of their children and are happy with them.

We have the same problem in Kansas City, and I am convinced that doctors and midwives are the cause of it, and that they teach these women how to do them. The moral side of this is wrong. I am convinced that "Thou shalt not kill" is just as much for this as for any other question, and I for myself will keep "clean hands" in this matter and lend no aid to a violation of that law which I believe is at the base of this problem.

DR. RAYMOND M. SPIVY, St. Louis (closing): I am rather disappointed that there has been so little discussion of my paper. In the first place, I felt from the viewpoint of both the gynecologist and general practitioner that this was an ideal subject for a paper to be read before a state medical meeting, and on account of its general interest would bring forth considerable argument. Secondly, I am aware of the fact that the views that have been set forth are somewhat radical. Particularly for this reason I had expected to be rather sharply attacked. Since so few of those who are here have responded, I am very much inclined to believe that their silence is an index to their openmindedness on this question.

Regarding the use of anesthesia, I wish to say that patients who have had a criminally induced abortion are as a rule very sick, and for this reason when it is thought advisable to clean out the uterus I feel we should attempt to get along without anesthesia. Some women are more sensitive to pain than others, and consequently with this class we do have to give an anesthetic. It is surprising how much can be done without an anesthetic and at the same time without causing a great deal of pain or shock to the patient.

In my paper I brought out the point that if the cervix and the vagina are packed, at the end of twenty-four hours when this is removed, the cervix is relaxed, and as a rule can be easily dilated with the finger.

We all of course realize how people of certain religious beliefs feel toward this matter of birth control, but it seems to me that the argument based on the viewpoint of the individual in any one group is not worth a great deal. So much of the world is composed of people whose trend of thought is diametrically opposite to that of certain sects, that rather the opinion of society at large must be considered in discussing a problem of this kind. As to the question of refusing to treat these patients when they come to us, I shall answer by saying that they are sick, often desperately sick. Somebody has to treat them. Why should we refuse? Certainly a practitioner should safeguard his own interest and make every effort to protect his name from unjust suspicion. To refuse to treat them, when their life is in danger from hemorrhage or sepsis, because they have committed a crime, is unfair both to ourselves and to the patient.

CARCINOMA OF THE LARYNX*

R. H. MEADE, M.D.
KANSAS CITY, MO.

The history of the surgical treatment of malignant disease of the larynx is rather recent, dating back from Braner's first thyrotomy in 1833. The first laryngectomy was performed by Watson in 1878. In Crile's paper on laryngectomy, he quotes Billroth as being the first surgeon to perform this operation, in 1874. Prior to 1889 the immediate deaths from opera-

* Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

tion were 44 per cent., with 4 per cent. living after three years. From 1889 to 1900 the immediate deaths were 8 per cent., with 44 per cent. living after three years. This shows one of two things: either that an earlier diagnosis or a more perfect understanding of the mode of procedure has been developed. Statistics show that one out of every seven tumors of the larynx is malignant.

Etiology.—The disease occurs more often in men. It is claimed that it is more common in the well-to-do—a belief accentuated by the death of Frederick the Great. This has not been true in the three cases which I will report, probably due to the fact that my practice has not been limited to the wealthy class.

Chronic inflammation, irritants such as tobacco, or the implantation on syphilis, or a benign tumor has been ascribed as among the etiological factors. According to Krishaber, lupus or simple necrosis may stimulate cancer.

Symptoms.—The most important symptom is continued hoarseness without cough or other known cause. This, in an individual over 40 years of age, should excite suspicion. Pain in the larynx, radiating to the ear, and felt in the pharynx is common. The pain is sharp and sudden. As the disease progresses there is cough with mucopurulent expectoration mixed with blood. Dysphagia usually denotes that the disease has extended into the pharynx or esophagus, and is manifested by the enlargement of the glands of the neck.

Diagnosis.—A history of chronic hoarseness without obvious cause demands a thorough investigation. A laryngoscopic examination often gives wonderful assistance, or better with the suspension laryngoscope with the use of cocain. This procedure is not painful or harmful and is indispensable in making a positive diagnosis. If there is any doubt, a piece of the neoplasm should be removed for microscopic examination. McKenzie's position, that "the removal of a piece for examination too often means the beginning of the end," is certainly not borne out by many observers.

Differential Diagnosis.—Syphilis may be excluded by means of a Wassermann test, but there may be cancer implanted on a syphilitic base, giving a positive Wassermann reaction as in Dr. Sawtell's case. Tuberculosis may be excluded by the presence of tubercle bacilli, and the usual involvement of the lung, night sweats and more loss of weight. Loss of weight is not the rule in carcinoma unless the growth is extensive. It may be differentiated from acute or subacute laryngitis by careful laryngoscopic examination, history and duration.

Krishaber's classification of the intrinsic and extrinsic tumors is of importance from a prognostic point of view. Under the term

intrinsic should be included those in which the growth is confined to the cavity of the larynx proper from the cords downward, within a closed cartilaginous box. The extrinsic tumors are those starting in the epiglottis or the aryteno-epiglottidian folds, or the cricoid, or having started in the pharynx and extended into the larynx, which should not be used, according to Krishaber's classification, but partly wall carcinoma or extension carcinoma of the larynx.

It has been shown by Krishaber and Frunkel that the intralaryngeal form of carcinoma remains limited to the larynx and is slow to involve the glands, while the extrinsic type affects the glands early. When the disease is intrinsic the prominent symptoms are aphonia and dysphonia, the glands being rarely affected, and, as a rule, no cachexia. In the extrinsic the prominent symptoms are dysphagia, pain in the larynx and pharynx, extending around the neck and to the ear of the affected side, glandular involvement and cachexia.

Decision as to whether you are dealing with intrinsic or extrinsic cancer is of much importance from a surgical standpoint. Intrinsic cancer is slow to involve hyaline cartilage, and therefore should be operated conservatively, which is a simple procedure and gives as good results as a complete laryngectomy. The operation for thyrocricotomy (total laryngo-fissure), thyrotomy (partial laryngo-fissure) should be the operation of choice, as recently described by Stewart, and more extensively by Semon and others in 1908, which leaves no deformity, and small surgical risk. This would be my method of choice in the intrinsic type. It is different with the extrinsic; the growth is situated on the interarytenoid space, aryteno-epiglottic folds or pyriform fossa, involving at times the esophagus and pharynx and lymphatic glands of the neck. In such cases it is necessary to do a radical operation after the method of Gluck, or some modification as described by Crile. These three cases demonstrate the seriousness of the delay in diagnosis, and still in one case which looked hopeless, his usefulness was spared for about a year.

Before discussing the operative interference in extrinsic cancer, a brief review of the lymphatic drainage for the larynx will be of interest.

The supraglottic lymphatics include the epiglottis, arytenoids, ventricular bands, vocal cords, and flow into the posterior cervical chain of glands. The infraglottic drain into the anterior cervical glands. The lymphatic drainage eventually leads into the chain lying under the sternomastoid, along the internal jugular vein. We can frequently come to some conclusions of the extension of the disease by the lymphatic involvement.

Treatment.—I do not believe any case that requires complete laryngectomy is completed if the lymphatic glands are not removed. Where the cancer is intrinsic, some one of the more conservative operations should be resorted to rather than complete laryngectomy. I wish only to discuss extrinsic cancer, and will deal chiefly with complete laryngectomy and the removal of all structures involved. The two-stage operation is, in my opinion, to be preferred. The preliminary tracheotomy and packing gauze around the lateral plains of the neck fixes the trachea, and forms sufficient adhesions to stop the to and fro motion of the trachea, thus preventing infection and the dreaded mediastinal abscess. Chile advises dissecting up one side of the larynx, all the way to the upper margin of the field of operation, and packing the territory with gauze to prevent vagitis. This puts the brunt of the exposure and adjustment on one vagus before the larynx is removed.

Operating in a dry field by thorough hemostasis and preventing inhalation of blood and bacteria must be observed during and after operation.

Crile also calls attention to the prevention of reflex inhibition of heart and respiration through irritation of the superior laryngeal nerves, by controlling the same with atropine and local anesthesia of the distribution of the superior laryngeal nerves.

The first case I wish to mention is that of a young man shown me through the courtesy of Dr. E. P. Hall, who introduced a suspension laryngoscope, giving a good view of the larynx.

CASE 1.—History of Case.—Chief complaint, difficulty in breathing (July, 1915). Present trouble began in February, 1915, but he had noticed a hoarseness for four years. In February, 1915, he felt a slight pain in his throat; felt as though he had influenza; became better and worse. He always became worse after taking cold. He kept growing worse. At this time his trouble had not been diagnosed as a tumor, and he was treated for a sore throat. For the past two weeks he had been troubled with shortness of breath aggravated on exertion. No loss of weight. Had slight temperature. Had worked all winter until February. No cough. No headache. A hoarse, husky voice.

Past Illness.—Diphtheria at 14, typhoid at 16, mumps at 15. Had occasional attacks of grip. Was not subject to colds.

Family History.—Father died at 52 years of heart disease. Mother living, and has had diabetes for thirteen years. One brother, aged 22, had epilepsy. Patient married to an epileptic wife.

Patient admitted to the hospital July 9, 1915, in an almost strangulated condition. Emergency tracheotomy performed with immediate relief; part of tumor removed through tracheotomy wound, sectioned and found to be carcinomatous. This man absolutely refused a radical operation. His condition gradually grew worse and he died in June, 1916. I was unable to get a history of his condition toward the last, for they lost track of him. Examination with a suspension laryngoscope showed that the tumor was above

the true cords and involved the epiglottis, which proved this to be the extrinsic type. I mention this case as one rather typical of laryngeal tumor. I examined him only once and obtained this history from the hospital records.

CASE 2.—Mr. H., brewery agent, 68 years of age.

Past History.—Had always been fairly healthy until present trouble began. Drank large quantities of beer. Said that he had contracted syphilis from his wife fifteen years ago, his wife having been infected by means of a physician's speculum during a vaginal examination.

Present Trouble.—Patient came to Dr. Sawtell in 1915, who diagnosed a tumor of his larynx, involving the pharynx and esophagus. He thought it looked like syphilis and sent him to Dr. Milne for a Wassermann test. This was positive ++++ in one-tenth of a c.cm. of blood serum. He claimed to have felt fairly well, had a good appetite; there was no loss of weight, or cough until the last month or so, but he had been hoarse for the last two or more years. He is now (November, 1915) losing weight, has severe dyspnea and dysphagia, and can only swallow liquids in small quantities. Dr. Milne, with such a history and a positive Wassermann, administered two doses of salvarsan and several doses of mercury. After the second dose of salvarsan the tumor grew rapidly, which made the former condition much worse. Dr. Sawtell asked me to see him. He was in a terrible condition, with rapid pulse 140, temperature 101. He could hardly get his breath, could swallow nothing and glands of neck greatly swollen. I performed an immediate tracheotomy under local anesthetic, preparatory for a future operation. The patient was relieved of dyspnea, but otherwise his condition was not improved. He was given proctoclysis continuously for the next twenty-four hours. Under local anesthesia I did a gastrostomy and began giving him liquids. His stomach tolerated food very poorly. His pulse became more rapid and he died on the third day following the last operation.

The rapid growth after salvarsan simply shows that intensive treatment frequently stirs up latent syphilis. Dr. Sawtell took out a piece of the tumor intralaryngeally for examination and Dr. Milne diagnosed it positively as carcinoma.

CASE 3.—Mr. Z., German-American, liveryman, 68 years of age. Present trouble began in September, 1912. He complained of something in his throat and continually tried to clear his throat. About eight months later he noticed his throat began to swell and he complained of pain when he swallowed. Two months later, after using local applications, the swelling began to fluctuate and was lanced by a local doctor. A considerable amount of pus was drained. This was in September, 1913. It required a month to heal. He was then treated by a nose and throat specialist for one month and a month with violet rays. He was then having a lot of difficulty in breathing. In February, 1914, he came under my observation, suffering with severe dyspnea and dysphagia, both of which were quite distressing. At this time a positive diagnosis of an intralaryngeal tumor was made, and a low tracheotomy performed preparatory to doing a more radical operation, but it was thought best first to think of syphilis. The Wassermann test was negative. Two injections of salvarsan, followed by intramuscular injections of mercury, was done, however. This treatment was continued until June without improvement. He had difficulty in swallowing liquids. He finally insisted on some surgical interference, which was done June 28, 1914. On account of the condition of his teeth, they were removed and the gums were allowed to heal before operation, and proper care as to cleansing the upper air passages was at-

tended to. He was given rectal anesthesia of ether in olive oil, supplemented with local anesthesia of adrenalin and novocain. In this case the disease involved the esophagus, epiglottis, anterior cervical and glands under the sternomastoid muscle, and all of the mass was removed in block, including the glands. The esophagus was closed with a purse-string suture, the structures above were closed as best we could, and skin flaps were brought together and sutured, leaving a rubber tube in for drainage. After this was completed, the stomach was brought through an opening made in the abdomen and fixed. About two hours after the operation was completed, the patient came out of the anesthetic and he was in good condition. Twenty-four hours after the operation he had some hemorrhage, which necessitated clamping and tying a bleeding vessel. The wound was then packed with iodoform gauze; later he had a fit of coughing, which was due to a small amount of regurgitated acid stomach contents trickling into the wound. The esophagus was again tied more securely, which caused this to cease.

Forty-eight hours after the first operation an opening was made into the stomach and feeding was begun immediately. He took his food, consisting of milk, eggs, soups, gruels, with occasional stimulants of brandy or beer, every three hours during the day and at midnight. Later he could chew his food, and mixing it with the saliva well masticated, would expectorate into his stomach, thus enjoying the taste of food which was very satisfactory to him. He made a perfect recovery and returned to his occupation, which was at that time constable, being able to earn a livelihood. About a year later his stomach began to rebel and he was unable to take food and apparently died of starvation. There seemed to be no evidence of return of the growth, for I saw him a short time before his death. The only evidence of the return was the pain in his neck radiating to his ear, due likely to irritation of the pharyngeal or laryngeal branches of the vagus from pressure on these nerves by the extensive scar formation.

CONCLUSIONS

Intrinsic cancer is slow to invade hyaline cartilage, and therefore should be operated by some of the more conservative methods, which give as good results as laryngectomy, and do not leave much deformity. Any case requiring complete laryngectomy is not properly operated if the glands of the neck are left. Cases of advanced extrinsic carcinoma of the larynx are not hopeless, as proven by my one case, and last and most important, early diagnosis is the keynote to successful results.

I wish to thank Dr. Sawtell and Dr. Hall for aiding me in the diagnosis of these cases, and Dr. Trimble and Dr. Milne for the pathologic reports, and Dr. M. J. Owens for assisting me in the operation, and Dr. P. H. Owens for the careful after-care of the first case operated.

Rialto Building.

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PROTEIN INDIGESTION IN INFANTS

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III

It is a well-known fact that one ingredient of the food has a powerful influence on the digestion and absorption of another. This is called the correlation of the food elements. Clinically, we know that an excess of sugar will cause a disturbance when the protein content is high. On the other hand, a large quantity of carbohydrates may be administered if the protein percentage is low. Similarly, a high percentage of protein is safe if the sugar content is low.

Clinically, too, it is known that a high percentage of fat necessitates a low percentage of protein, and that the process of fermentation or putrefaction may be favored by undigested fat.

Our physiologic knowledge of the correlation of food elements is still very meager. It is known that fat retards the digestion of protein in the stomach. It delays the evacuation of the gastric contents. The fat is caught in the meshes of the coagulated casein and the bulk of it is emptied into the duodenum with the casein. The coagula become coated with a layer of fat and thus resist the action of the digestive juices as is shown in the passage of bean-like masses in the stool when unboiled milk is given. The delay in the stomach gives more time for the absorption of sugar in the intestine before the casein reaches the intestine. Whether this has something to do with the constipating effect of fat under certain conditions is not known. At any rate, an excess of fat usually leads to hard, soap stools when no fermenting carbohydrate is present. Hence, putrefactive changes from protein indigestion are favored by an excess of fat, and it is the impression of the clinician that it is the resulting putrefaction of the protein and not the fat itself that causes malnutrition, contrary to the theory of Czerny. The symptoms are often relieved by reducing the protein and not the fat.

Here I desire to offer a hypothesis. The great desiccation of the feces in many forms of fat intolerance is the natural method of overcoming putrefaction. The drying process stops bacterial growth and it is well known that the dry stool contains a less amount of bacteria than the liquid stool. A purgative always increases putrefaction and fermentation.

The intestine has several ways to deal with putrefaction quite different from the stomach, which must depend on the antiseptic power of the hydrochloric acid. The first of these is the rapid absorption of the protein substances; the second is the rapid peristalsis; and the third, in the colon is a rapid absorption of the water

with its dissolved substances. It is to be expected then that the residue in the soap stool would be small, all soluble constituents being absorbed. The polyuria and probably increased ammonia excretion are explicable on the ground that certain bacterial or digestive products may have a diuretic action.

The hypothesis is presented for what it is worth.

Another effect of an alien protein is that it delays the absorption of milk sugar. This has been clearly demonstrated in the calf by Freudenberg and Schafmann.¹ These authors found that the milk sugar was very rapidly absorbed when cow's milk was given, but a great delay occurred when an alien milk was used. After several trials they demonstrated that not the salt but the foreign protein substance in the whey causes this retardation in sugar absorption. This is corroborated by the common clinical result that diarrhea results easily when whey preparations are used.

No doubt there are still other factors which exert an influence on the correlation of the food elements. Experience teaches that even very simple inert substances are often sufficient to initiate a digestive disturbance.

It occurred to me that in different cases the administration of food elements at different times might be serviceable. Thus in diarrheal conditions it is often possible to administer the protein at one feeding and the carbohydrate at another. Recently I tried this in a few cases, one of which may be referred to.

CASE 1.—E. D., aged six months, has been on various artificial foods since the first weeks of life. Has gained very little in weight for the last two months. She is now taking dextrinized flour and milk mixture. The stools are hard at present but she suffers from diarrhea when any malt preparation is added.

The following was prescribed: Whole acidified milk alternated with a thick cereal decoction sweetened with sugar given every three hours. With this diet the baby commenced to gain in weight rapidly. Buttermilk mixture had been tried previously.

This method has provisionally been termed the "alternate method" of feeding and I hope will be an additional serviceable means of overcoming intestinal putrefaction and fermentation. Further reports on this method will be made later.

There is no doubt that the most powerful agent to prevent intestinal putrefaction is the fermentation of carbohydrates and the resulting flora of acidophilic bacteria. This subject, at first brought out prominently by Escherich, has been again and again proven experimentally (Kendall, etc.). The acid yellow stool of the breast-fed baby is the type of the normal stool of the infant who is doing well, and it is remarkable that artificially-fed infants do well only when the physical and chemical characters

of the stools approximate those of the naturally fed baby. We have learned, too, that the hard constipated stool is usually, but not always, evidence of too much intestinal putrefaction, or at least of malnutrition (milk injury) and the most successful therapy is to give a combination which insures an acid stool. The successful management of the infant who does not thrive, who has hard, light colored stools (an evidence of putrefaction), is to administer, not as is often erroneously stated a more easily assimilated carbohydrate, but one which undergoes more rapid fermentation. This is found in the malt sugars. Hence malted milk, Nestle's food, Mellin's food and malt soup extract are the favorite foods for this condition. Often success is achieved by increasing the whey content of the food. These malt and dextrin preparations are not more completely absorbed; on the contrary a large carbohydrate residue is found in the stools (Hedenius). These sugars are more quickly fermentable.

We have made numerous tests which show that the fermentability of sugars may be placed in the following order:

Milk sugar, cane sugar, dextrimaltose, malted milk, Mellin's food, malt soup extract.

One experiment will be given:

Four fermentation tubes were incubated in a thermostat for twenty-four hours. Each tube contained equal parts of cow's milk and water to which 5 per cent. of the carbohydrate was added. All tubes were inoculated with a minute drop of infant stool.

Tube 1. Milk sugar. No gas bubbles, acidity 1.5.

Tube 2. Cane sugar. A few gas bubbles, acidity 1.6.

Tube 3. Dextrimaltose. A few gas bubbles, acidity 1.7.

Tube 4. Mellin's food. Gas 3 c.c., acidity 3.3.

It is clear that the strong malt preparations ferment quickly, increase the acidity of the stools, and thus become very powerful agents in overcoming intestinal putrefaction. I never could understand, as we have repeatedly shown, why dextrimaltose ferments so much more slowly than other commercial malt preparations.

In the naturally fed infant milk sugar seems to be the ideal sugar to prevent intestinal putrefaction. In the artificially fed infant we must often resort to carbohydrates having a greater capacity to ferment. If we increase the milk sugar to a degree where its fermentative products appear in the stool, diarrhea results so often that many practitioners prefer to use other sugars.

It is peculiar that the acidity of the diarrheal stool due to an excess of lactose is not very high. It is not so high as the normal breast-fed stool. We must conclude, therefore, that some other factor in addition to the acidity aids in this diarrheal tendency. Probably this too will be

1. *Jahrb. f. Kinderb.*, lxxix, No. 6.

found in the derivatives of protein substances. I need refer only to that powerful purgative studied by Mellanby² in the Pharmacological Laboratory of the London Hospital Medical College and called *b*-imidazolethylamine. The formation of this substance seems to be connected with a poor absorption of histidine, and its excessive production depends primarily on an increased bacterial activity in the intestine. Our so-called sugar diarrhea may not be due to sugar fermentation at all but to other substances.

It is difficult to understand why the normal acidity of the stools so much desired does not occur in the simple indigestion of infants. The acidophilic bacteria appear only when some malt preparation is added.

From the study of Talbot and Gamble³ on an infant taking increased quantities of protein we learn that the ammonia content of the stool gradually increased, but we do not learn how much ammonia was absorbed as such and converted into urea by the liver. In the end of the trial very clearly symptoms of an acute dyspeptic and metabolic disturbance were manifest.

But in this experiment the correlation of food elements was not clearly expressed. The fat was reduced with the increase in protein, while the sugar was increased. Obviously, the disturbance in nutritive equilibrium may have been due to too much carbohydrate fermentation favored by an excess of protein.

When the pediatricist considers the numerous factors involved in the proper digestion and assimilation of food, it seems inconceivable that the subject of malnutrition in the artificially fed infant will be solved by metabolic experiments, however valuable they may prove to be in the end. We must still depend almost entirely on the facts gathered by clinical experience, and these point in only one direction, namely, that the digestion of heterologous protein stands at the root of the trouble. But this difficulty is not solved by reducing the protein component of the diet to a minimum, rather our aim must be to give plenty of protein, but it must be correlated with other food elements in such a way that its unabsorbed residue does not serve as food for intestinal putrefactive bacteria.

This can be done by hastening its absorption by peptonizing it, by acidification, and by so combining other elements that it shall serve only for fermentative and not putrefactive processes in the intestine. The difficulty seems to lie in keeping the fermentative process within certain limits which is tolerated by the intestinal mucous membrane. In the breast-fed baby there seems to be a perfect control, but this control of the acidity is defective when the baby is artificially fed, and the intestinal epithelium seems to be much more sensitive to the acids produced

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HEALTH CONDITIONS IN THE MISSOURI PENITENTIARY *

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The health of the inmates of the Missouri State Penitentiary is looked after by one physician appointed by the Governor for a term of four years at a salary of \$200 per month. He may take two meals per day in the prison hospital if he so desires, and if a single man, he can have a bedroom and sleep in the institution without any expense to himself. If he has a family and lives without the walls, he receives his \$200 per month, is furnished ice from the prison ice plant and allowed one servant. In return he is required to be at the prison hospital at 6 o'clock every week day morning and at 8 o'clock on Sunday morning to take care of what is designated the "morning sick call."

Every man who enters the penitentiary is sent to the hospital before being assigned to work, where he is given a card on which his name, together with any particulars of importance about his former history and blank spaces for noting down what treatments he receives from time to time. If, when turned out of his cell in the morning, he does not feel like he is able to work or if he wants any medicine or surgical dressing, he is permitted to take his card and repair to the hospital where his condition is passed on by the physician who may excuse him from work or dispose of him as he thinks proper; noting on the card what medicine or dressings were given. A convict assistant keeps the cards, and after taking from them what he needs for his records, returns them to the hall guard in the prisoner's cell building, who sees that they are distributed to the proper cells where the prisoners find them when they come in from work in the evening. This is the disagreeable part of the physician's work, for among three thousand men of the class filling the penitentiary there are, of course, a large number of "weary willies" who lie awake nights devising schemes whereby they may deceive the physician and be excused from work, and he will be a very wise man indeed if he is not very frequently imposed on. When other things fail, the men sometimes resort to cutting their fingers or perhaps rubbing irritating substances into slight wounds to make them ulcerate or put moistened match heads on the skin, causing ugly and persistent ulcers.

The physician has the authority to send them on to work or to excuse them to their cells, or if he thinks it necessary, to put them in the hospital. If a man takes ill in the shops during the day, the guard sends him to the hospital with a

2. *Quart. Jour. Med.*, ix, No. 35.

3. *Am. Jour. Dis. Child.*, October, 1916.

*Read at the Sixtieth Annual Meeting of the Missouri State Medical Association, Springfield, May 14-16, 1917.

runner, to be passed on by the physician. After the evening meal at 5 o'clock, p. m., the men again have the privilege of repairing to the prison hospital before entering the cells for the night. During the last year, which is probably a representative one, the morning sick call averaged eighty per day, while during the remainder of the day there was an average of 115, making a total of 195 calls each day that the physician answered. This does not include visits to those confined in the hospital wards. A large percentage of those calls were for minor injuries, cut fingers, bruises, sprains and needle wounds needing surgical dressing. In addition to this, during the last year 158 elective surgical operations were performed, with operations for hemorrhoids leading the list; radical cure for hernia and appendicitis as close seconds.

This would be an almost impossible amount of work for one man were it not for the fact that the medical profession of the state usually keeps from one to three of its members in the penitentiary as convicts who are assigned to duty in the hospital, and who do much of the routine work.

Most of the physicians who have had charge of the penitentiary did not do major surgery, and it has been the custom for many years to appoint an associate surgeon residing in Jefferson City who does this work without any compensation whatever, unless the experience which he gets could be counted as compensation.

Nursing in the hospital is done by the convicts entirely and the best nurses are the young men who have had service in the army or navy and have been in some way attached to the hospital department.

After the day's work is done, the men are formed into line and marched to the dining room, and as soon as the evening meal is finished they again form into line and march to their cells in which they are locked and remain until 6 o'clock the following morning.

The men are housed in cell buildings known as "halls," and these halls contain from 350 to 1,000 men each. One hall only half completed and occupied, the rest of it being now under construction, is strictly up to date and modern, well ventilated and lighted, housing three men in each cell. It has sanitary plumbing and running water in every cell, and modern shower baths in the basement. It houses 350 men of the 2,800 inmates. One other hall in the penitentiary has been built during the modern era and is fairly sanitary. The other three, housing about 1,500 men, where they stay from 5:30 o'clock in the evening until 6 o'clock in the morning on every day, and nearly all day on Sunday, are "monsters of such frightful mien, that to be hated need only to be seen." One of

them, housing 900 men, about equally divided between black and white, has four tiers of cells, one above the other, along each side of a corridor in the center. These cells are 13 feet long, 6 feet wide and 8 feet high, containing about 648 cubic feet, and each cell contains seven prisoners, which allows less than 100 cubic feet of breathing space to each man. Each cell has two windows cut through the solid masonry side of the building, and these windows are 6 inches wide and three feet high. The other end of the cell connects with the corridor by a barred door. These cells contain no plumbing whatever. The seven men using one "night bucket." At the end of the corridor there is a fan which throws air from the outside into the corridor. It fans cool air in summer and warm air in winter. If you will call to mind the number of cubic feet which our physiologies taught us that each human being should have, you will readily see that the seven men confined in the cell the size of which I have given, do not receive anything like what is supposed to be necessary for one.

Bad as this condition sounds, this cell house is somewhat of a palace compared with the oldest one still in use in the prison. It is a long, gloomy building with the cells placed in solid masonry in the center, with poorly ventilated and lighted corridor around the outside. These cells are veritable crypts dug into solid rock with a small lattice door at one end just large enough for a man to enter in a stooping position. Each cell is 7½ feet long, 4 feet wide and 7½ feet high. They are so dark that one cannot see to read in them on the brightest day. Each of these cells contain two men in bunks, one above the other, and the only ventilation is a small pipe leading from the cell out through the top of the building with no provision for forcing air through it. If you were to hollow out a crypt in solid rock and place a small barred door at one end and then place these rocks in the center of a long gloomy building, you would have a fair conception of what these cells are like in "D Hall" as it is called. Into this building is placed every night about 600 negroes.

With this statement of facts, it is hardly necessary to tell a medical assembly what the health conditions are, for doubtless any of you could write the remainder of the paper without further knowledge. Consumption flourishes like the green bay-tree. Patients cannot be properly segregated, for there is no place to put them. Furthermore, they do not come under observation frequently until in the last stages of the disease and after they have subjected their cell mates to almost certain infection and sowed the germs into the lungs of the susceptible throughout the hall.

Thus it happens that men convicted of petty crimes for which the judge who sentenced them thought that two or three years confinement was adequate, very frequently receive a life sentence.

The hospital building within the prison walls is really a cell building rather than a hospital; poorly ventilated and lighted and poorly situated, having almost no grounds for exercise or recreation, and containing none of the appurtenances of a modern up-to-date hospital. It would be large enough to accommodate all of the sick were it not for the fact that one ward of it is given over to the consumptives and a large part of another ward to the criminal insane. It has been the custom when a man was found with consumption to take him out of the cell house and place him in the hospital. When this was filled and could accommodate no more, there was left no alternative to the physician except to issue a sick parole and send him home. Most of those I have been able to follow have gone to homes in crowded districts, poorly suited to their care, and it is safe to assume that they carried infection to many innocent victims. I am sure you will appreciate the want of wisdom displayed in sending these men out into the different communities of the state, yet to keep them within the walls, cuts off all hope of recovery and means the almost certain infection of numbers of people who, perforce, are housed in the same close building with them. For many years I have tried to impress on the Missouri legislature the absolute necessity of building a place where these men could be properly isolated and treated, but with very indifferent success. The last legislature appropriated \$5,000 for the relief of this condition, and this is the first money it has ever been possible to obtain for this purpose. Of course, it is only a drop in the bucket, and just what good can be done with this amount of money I am unable to say, but it is at least a beginning. If there was a focus of infection anywhere within the state that sent out cholera germs to infect our hogs, or the foot and mouth disease to infect our cattle, I have no doubt it would be an exceedingly easy matter to have it eradicated. But since it seems to be only a small matter of having a focus of infection which affects the health of the citizens of the state, it is an exceedingly difficult matter. As I have said before, the last legislature appropriated \$5,000 for taking care of the consumptives in the Missouri penitentiary, and the same legislature appropriated the sum of \$50,000 with which to pay for the slaughter of diseased animals for the years of 1917 and 1918, and \$127,300 to pay for animals which were killed during the years of 1915 and 1916. They also appropriated over \$4,000 for

the payment of premiums to encourage the raising of fine poultry for the years of 1915 and 1916, and \$25,000 for educational work and premiums for the poultry experiment station for the years 1917 and 1918.

It has been frequently remarked by those who have inspected the report of the prison hospital, that the percentage of deaths from tuberculosis was very small. That is true, but the reason for it is that most of the men affected with the disease were sent out on sick parole before they died. During the year 1916, fifty-two men and two women were discharged from the institution on sick parole, and nearly all were in the last stages of the disease. How many of them have since died I have no means of knowing, but I am sure from the condition they were in when they left the institution that many of them have died. How many people they infected on the outside is only a matter of conjecture. My experience has been through observation of legislatures that if enough people want anything and want it bad enough and long enough, they will finally get it. The only other way to get it is to have money enough, and as we have not the latter, my hope in telling you these things is, if possible, to enlist your interest in keeping this matter before the legislature until they remedy these evils and provide a place where these men can be kept without infecting their cell mates and families on the outside. The medical profession, so far as I know, has made no organized effort to remedy this condition, and what has been done has been done by a few who were familiar with the conditions, but who did not have influence enough to carry any weight with the legislature. I suggest that our society go on record as favoring this matter of building a tuberculosis sanatorium for the care of those within the Missouri State Penitentiary, and that each and every member be urged to take active interest in seeing that his Representative and Senator be informed of the conditions, and it is largely for this purpose that I have presented these conditions to you.

The improper housing of the inmates has had much to do with favoring unnatural sexual practices, and venereal diseases are exceedingly common. Formerly syphilis was exceedingly prevalent, and but poorly treated; but since the discovery of salvarsan, which the authorities have been very liberal in buying for the inmates, the treatment has greatly improved, and syphilis has lost many of its terrors. Many of the men who were indifferent about taking treatment under the old regime seem to think that taking a "shot in the arm" as they call it, is a very proper thing to do, and as a consequence the condition has been greatly improved, although it still continues to be very common among those who enter the institution from the outside. At

present those who come in with the disease are put on active treatment immediately, and are followed up until the disease is well controlled. The condition of the men who enter the penitentiary from the different jails of the state would lead one to believe that they are in a deplorable condition, and that the treatment the men receive while waiting trial is far from what one would expect in the present state of medical knowledge.

Constipation is almost universal among the inmates, but digestive troubles are hardly more prevalent than among a like number of men on the outside.

The following diet list is used almost every day in the year with very slight variations:

Breakfast: Hash, coffee and bread.

Dinner: Beef, usually boiled or beef 'stew, potatoes, coffee and bread.

Supper: Raisins, syrup, coffee and bread. About the only variation made in this list is that prunes or dried peaches are sometimes substituted for the raisins. Meat is the piece de resistance of two meals of the day. It is of good quality and well cooked, and the men eat it in great quantities, as the amount that they may have is almost unlimited. This would seem to be a large excess of proteid food, but acute kidney trouble is rare among the inmates, even the long termers. Just why this should be so may possibly give food for thought to those who are claiming that alcohol is very little, if at all responsible for nephritis.

A great deal has been said in recent years, and sometimes with much bitterness, against the contract system of working prisoners. Many well-meaning and honest people have looked on the abolition of this system as a panacea for all the evils incident to prison life. I grant them the credit for being sincere, but I doubt the correctness of their judgment. It will be found that if a different system be adopted in this state, a large percentage of the men will still have to be worked behind the prison walls, and that furthermore the change will have to be made slowly and carefully, otherwise conditions will be made worse rather than better. It will be impossible for a sufficient number of prisoners in the Missouri Penitentiary to be taken outside the walls to work, to leave good quarters sufficient to accommodate those who are left behind. Thus it will appear that unless something is done in the way of providing more commodious quarters for the prisoners, it will necessarily be many years before they can be properly housed, even though many of them are worked on the outside. While these conditions are so, the health conditions within the penitentiary must necessarily remain poor. I hold no brief for the contract system, and have no

interest whatever in what plan is adopted for the employing of the prisoners, but one thing I am absolutely certain of, and that is that they must be worked. They realize that fact themselves and frequently make mention of it. To the minds of the majority of the men confined within the prison walls, there is nothing quite so bad as the solitary confinement of being locked in the dingy, and frequently uncleanly, cells which the men inhabit when not in the shops.

Some years ago a discharged prisoner who had been an inmate of both the Missouri and the Kansas prisons, wrote a book describing life in these institutions under the title of "Twin Hells," and if there is any justification for such an arraignment of these institutions, it is in the housing conditions rather than in the contract labor system. Some weeks ago I met an ex-warden of the penitentiary, and pointing to "D Hall," I said, "Mr. Warden, what do you think of the housing condition of that building?" He replied, "Doctor, I would not think of keeping a bird dog of mine in any such surroundings. It is a disgrace to the state that such a condition should exist, but the officials of the penitentiary have absolutely no other alternative when the men are sent in from the different counties of the state, except to house them in such a place, as there is no money available for remedying this condition."

I have noticed in the years that I have been observing the penitentiary that a very large percentage of the men committed to the institution for the crime of rape are tubercular, and many of them in the last stages of the disease. Whether this is an accident or whether there is any connection between the crime and the disease, I am not prepared to say; but of one thing I am sure, and that is that if the prison physician sends these people out on sick parole, however many extenuating circumstances there may be in the evidence that sent him up, he is almost sure to receive within the next few weeks, a letter from the prosecuting attorney of the county from which he came, which has in it things that tend to make the physician say words that are not in the catechism.

I have had very few protests on account of other crimes, but for these offenders, even when ill, the quality of mercy seems to be very much strained.

To blame the prison officials for the conditions as has been so popular of late with the press of the state, is futile, as they have taken large chances in making improvements and erecting buildings without specific instructions and without money appropriated to pay for them. Doubtless many of you have been led to believe that general conditions there are in a

deplorable condition, but the truth is the dietary and the general treatment of the convicts has steadily improved, and is better today than ever before in the history of the institution. These things have all been modified to correspond to modern ideas of prison management, and it is only the housing conditions that are archaic, as some of the buildings still in use were constructed in 1876. As you well know, our ideas of prisons and prison management has been entirely revolutionized since that time.

The hospital is not a hospital, but a cell building, and not by any means a modern cell building at that, while the majority of the cell buildings are not buildings but dungeons. These conditions must be remedied by the state before we can hope for anything like the proper reformation among those incarcerated and before the health conditions can be anything but bad.

Central Trust Building.

STRICTURE OF THE ESOPHAGUS

SUCCESSFULLY DILATED FROM BELOW UPWARD
THROUGH A GASTROTOMY OPENING

ERNEST F. ROBINSON, M.D.
KANSAS CITY, MO.

This case is reported not only because of the method of treatment, but because of the length of time (twenty years) that no solid food has entered the stomach and liquids only in the smallest quantities.

April 9, 1917, Miss M. B., a slender, emaciated girl, 21 years old, weighing, fully clothed, only 70 pounds, was referred to me by Dr. J. W. Carter of this city. She had been working as a stenographer until a few days ago when she was compelled to remain at home on account of weakness. Since birth this girl has never been able to swallow solid food. Ever since she can remember, when she would eat, the meal would be vomited about four to six hours later. For the past few months even milk would be ejected from the esophageal pouch, usually in a hard curd.

A roentgenogram and the fluoroscope, after a glass of bismuth and buttermilk, showed a large esophageal pouch about 2 inches above the diaphragm. A faint, fine shadow about the size of a small knitting needle could be indistinctly traced through the stricture into the stomach.

An effort was made to pass the stricture by having her swallow fine silk threads. In order to get these down they were attached to small pieces of easily dissolved chocolate cream candy, but no success resulted from these efforts.

At the German Hospital, April 10, 1917, under ether anesthesia the abdomen was opened by a vertical incision about 1 inch to the left of the median line. The stomach, which was very small, was brought into the wound and an incision just large enough to admit the index finger was made low down on the anterior surface. After locating the esophageal orifice a small

bougie was passed with difficulty through it up into the pouch and out through the mouth. To the bougie was attached a heavy linen thread which was drawn out of the gastrotomy opening. A heavier silk thread was tied to this and then a double piece of obstetrical tape. There was thus established two heavy ligatures through the gastrotomy opening, through the stricture, and out the mouth. The ends of one of these were tied together to serve as a safety ligature. To the other was attached a rubber drainage tube which was pulled through the stricture and the end allowed to protrude from the stomach opening. Several holes were cut in the tube to permit feeding through it. The stomach was attached to the abdominal wound and the tube was invaginated to prevent leakage from the stomach.

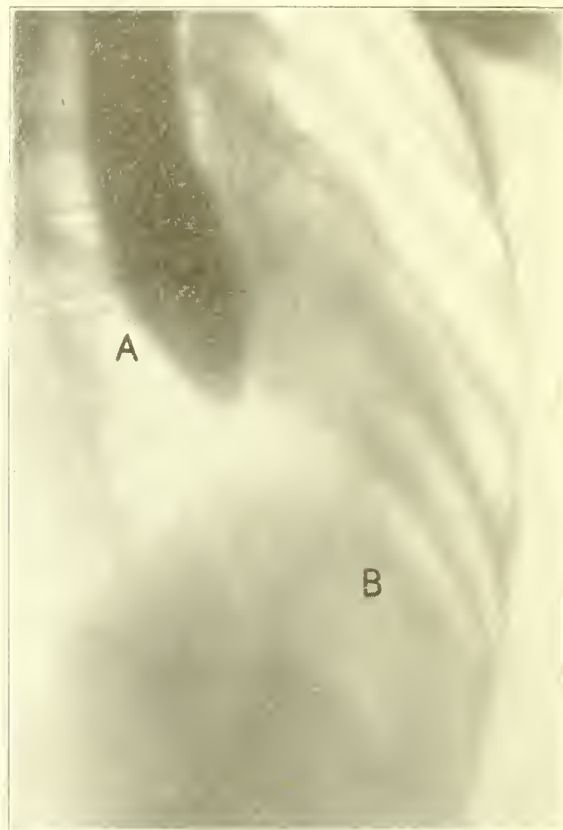


Fig. 1.—A, dilated esophagus; B, stomach.

The patient showed no untoward symptoms from the operation. She was fed through the tube for the first three days and when the tube was removed, liquids and soft food were given by mouth. The gastrotomy closed in ten days with in fact very little leakage after the removal of the tube. The emergency or safety ligature was not removed until the tenth day when bougies were passed by the mouth. These were continued each week for some time.

An interesting feature of the case was the great gain in the weight of the patient. At the end of the second week she had increased 11 pounds. This great gain was due undoubtedly to the fact that her body has been almost dehydrated. She has continued to improve and three months after operation weighed 100 pounds.

603 Bryant Building.

MENTAL HYGIENE AS A FACTOR IN PUBLIC HEALTH *

FRANCIS M. BARNES, JR., M.D.
ST. LOUIS

The rather generalized interest shown in the question of public health during the comparatively few years past has served to throw open to the medical profession a large opportunity for the extension of their already great achievements in increasing human happiness and efficiency. We have been too much inclined to the belief that the health of the body politic was a matter to be left to the local health officer and his organization. It is perhaps true that the beginning must be made by the health authorities, but it is equally true that the health officer alone without the cooperation of the citizenship will not be able to accomplish the greatest possible good for the largest number. That the citizenship has to a degree become interested in these problems becomes evident when one notes the number of state and national organizations which have been formed throughout this country for the purpose of promoting the study and advancement of hygiene in one or more of its phases. To the larger cities has logically fallen the task of initiating the greater part of this work, but smaller communities must be given a proportionate amount of credit for such efforts as they have made along these lines. The visiting nurse in rural districts is a very good example of the effort to raise the standards of health and many local societies in the smaller communities constitute connecting links through their affiliation with national associations formed for similar purposes. Although the mention of health in any way almost immediately suggests a physician, it would be unfair and unjustly flattering to assume that the medical profession has been responsible for all of the progress so far made in the advancement of the cause of public health. Those of the citizenship who have become educated, as it were to the medical point of view, have exhibited a lively interest in this whole problem. Much has been accomplished and yet much remains to be done, and the greatest hope lies in a persistent, well-organized endeavor to educate to the point of interest those citizens who as yet have not been reached, or who do not care to be reached. As someone has said, knowledge begets interest, and interest begets activity. Whenever a community is threatened by an epidemic of some contagious disease, interest is then easily and rapidly aroused, and a demand for immediate protective action is quickly made. We must remember, however, that less spectacular dangers than epidemics are always at hand to undermine health, and it is in these less evident,

but more insidious but equally important dangers that interest must be awakened and against which action must be taken if we seriously wish to improve public health. Sanitation has a too limited meaning to the public generally. People are too much inclined to think when the word is mentioned only of physical cleanliness in its relation to disease; fresh air, pure water, good sewerage systems in their connection with contagion and sickness are dominant items. Sanitation must be thought of in a broader sense as a part of hygiene, and hygiene of the mind is just as important as hygiene of the body.

The importance of adequate provision for the prevention and treatment of mental disorders is only too plainly evident to those who have for one reason or another become sufficiently interested to inform themselves on this subject. Although there has been some recognition for many years that mental disease and feeble-mindedness constitute an increasing menace to the health of our population, it is only within the past decade that mental hygiene has received noteworthy widespread attention and support. It is more than surprising with the known prevalence of mental disorders today, and with the knowledge which any thinking person must have of the personal and social difficulties occasioned by them, that the general public has not shown a greater interest long ago. It is chargeable to the medical profession at large that it accepts this situation almost without protest or effort at correction. The lack of interest and short sighted indifference on the part of the citizenship generally may be attributed to several causative factors. Of these, one of the most important is that perhaps the majority of people, and we include here the medical profession, still has a strong belief in the saying "once insane, always insane." It is quite natural that anyone believing that all insanities are incurable should have come to entertain such a pessimistic belief, and therefore have come to look on the state hospitals merely as a provision whereby society may rid itself of such objectionable members without considering for the moment the fact that somewhere between 30 and 40 per cent. of the patients admitted to these hospitals are discharged as recovered.

It is an old observation that the surest way to arouse a person's interest in a given subject is through his pocket book. Let us therefore cite a few figures to show from the economic standpoint how important this problem is. We may best do this by comparison. From the last federal census (1910) we learn that there were over 187,000 persons in institutions for the insane in this country, more than the number of students in all the colleges and universities in the United States; more than the number of officers and enlisted men in the United States Army, Navy and Marine Corps (July, 1915). And mind you, this number was in institutions

*Address before the Public Meeting of the Gasconade-Maries-Osage County Medical Society at Hermann, Mo., Nov. 16, 1916.

and does not include an almost equally large number who were not thus cared for, and who were in part at large in the community. Again, stop to consider that about 30,000 new cases of mental disease are admitted to institutions in the United States each year and then remember that the annual increase in the number of patients under treatment is about 6,000. Let us look for the moment at the cost to the states of caring for this 187,000 insane. We find that for one year the total cost was \$32,804,450, or somewhat more than a million and a half dollars more than it cost in any one year to build the Panama Canal (\$31,236,184). Now if we add this amount to the estimated economic loss to the country occasioned by the withdrawal of so many persons from productive labor we have a total amount of \$162,000,000, an amount equal to the entire value of the wheat, corn, tobacco, dairy and beef products exported from the United States annually. These figures and comparisons only give you an idea of the enormity of the problem as viewed from a monetary standpoint, but they are certainly sufficient to show that if there is any such thing as mental hygiene it evidently must be admitted as one of the most important factors in public health.

It is evident that only a most extensive and carefully directed organization would be competent to deal with any measure of success with such a problem of nation-wide extent and importance. Agencies for this purpose have already been established, the principal of which is The National Committee for Mental Hygiene and its affiliated state societies for mental hygiene, of which the fifteenth was founded in Missouri in May of this year. To give a comprehensive definition of what is meant by this campaign we may say that "by a campaign for mental hygiene is meant a continuous effort directed toward conserving and improving the minds of the people; in other words, a systematic attempt to secure human brains, so naturally endowed and so nurtured that people will think better, feel better and act better than they do now." This mental hygiene movement aims to spread abroad the knowledge which has been gained in the medical study of mental disorders, and to promote in every way possible, its effective application in dealing with the problems occasioned by these disorders in the individual and in the social body.

Before we can begin to spread abroad a knowledge of mental disorder with any understanding of its causes and prevention, it is first necessary that we collect this information. The question arises, where can this be obtained? The natural and logical answer to this would appear to be: by a study carried on by trained medical men of the thousands of insane now in our own state hospitals for the insane. This brings us to a consideration of the different types of state hospitals which are to be met

with in this country, and the facilities which they offer for such study and investigation as it is desirable to make. We find that the state hospital standards vary from one extreme, where the care is little better than that offered in the asylums of a century ago to the other, where we find the most efficient hospital organization with every modern facility for study, research and treatment provided and *utilized*. Between these two extremes, and here we would place Missouri, we find state institutions where the necessity and advantage of the hospital idea has been partly realized, but without a clear conception of the special character of the medical and nursing attention which is indispensable to the proper study of mental disease, and where political and personal consideration are permitted to impair fatally the quality of service rendered. This situation has long been realized by the medical profession, but only recently has interest been brought up to the point shown at the last annual meeting of the Missouri Medical Association, when there was introduced a resolution to remove all state institutions from the detrimental influence of political control.

Just so long as the positions of control in the state hospitals are filled on the basis of political preferment and not merit, just so long will these institutions in Missouri remain in their undesirable and inexcusably inefficient condition, and by just so long will the benefits of a mental hygiene movement in this state be delayed or even impossible. So long as the public will sit meekly by and permit of such disgraceful and disgusting procedures as we have been forced to witness during the past several months in connection with appointees to state hospital positions, just so long will such unscientific, inefficient and debasing practices continue. Economy and administrative efficiency on the part of the state hospital superintendent are to be sure commendable traits, but when the interest in the buildings and the farm becomes so great that a knowledge of the patient's condition and its treatment are neglected, then this is not efficiency in medicine. We do not want farmers with a medical degree to superintend our state hospitals, but physicians who have through special interest, training and study, equipped themselves with a knowledge of the causes, recognition and treatment of mental disorders. The only way that such men can be obtained for these positions or induced to accept them, is by the establishment of the merit system, and by providing for these men so selected modern hospitals and facilities where scientific study and efficient treatment may be carried on untrammelled and undisturbed by the purely political policies of the party in power. The state hospitals should serve as the center of knowledge concerning the insane, the atmosphere of custodial care only should be entirely dissipated and a hearty

cooperation engendered between the public, the medical profession and the hospital staff. By such a cooperation, information concerning insanity would be spread abroad, interest would thus be awakened and when this is once accomplished, betterment of present conditions is sure to come speedily.

Mental hygiene has for its purposes: To work for the conservation of mental health, for the prevention of mental diseases and mental deficiency, and for improvement in the care and treatment of those suffering from nervous and mental diseases or mental deficiency. These purposes may be accomplished in several ways, but the first and most important of all is the matter of popular education by which the public may be instructed regarding the causes, prevention, nature and treatment of mental disorder. This education may be carried on by the distribution of pamphlets, by public lectures and illustrated talks on mental hygiene in all of its phases, and by arousing interest in clinics and hospitals for the recognition and treatment of cases of mental disorder while in their earliest and most curable stages. Another great help in mental hygiene work is to be found in the social service work carried on by a visiting nurse trained in a knowledge of persons with mental disorder, who can visit in their homes those who need advice and who also can give advice and assistance to discharged patients with a view to preventing their relapse and helping them to re-establish themselves in community life. A third way, which depends largely on the extent to which education has been carried by the former two is by means of legislation that will provide for a betterment of existing conditions. Before desirable legislation can be enacted, accurate information concerning existing conditions and needs for the future must be provided, and this is best secured by means of a thorough investigation or survey of the entire state conducted by men competent by training and experience to undertake this work. Only one thing prevented such a survey being carried out in this state last year *without cost to the taxpayers*, and that one thing was politics.

At the present time almost every association whether medical or more purely social, in any way interested in our state institutions has its committee to investigate and recommend needed legislation to remove these institutions from politics. These committees are working almost entirely independently of each other without enlisting mutual support in attaining their common purpose. Each one is endeavoring to frame provisional laws all of which center in a state board of control for the state institutions. To be properly formulated, such laws should be based on an intimate knowledge of the state institutions, their present conditions and needs. Such knowledge is not obtainable in Missouri

today, and can only be procured by means of a survey of state-wide character and scope, carried out with particular viewpoints in the foreground. Until such information is obtained the only laws possible must be formulated on the basis of copy from other states where they have been more or less successful, but where circumstances and needs may be far different from those in our state. Every year we see laws enacted which are untimely, inadequate or useless, because of lack of funds to make them operative. Our state treasury is now in such poor health that it is hard to see just where additional funds for new reforms are to come from. Therefore, to attempt to have laws enacted now when it cannot be clear what is needed or how it can be obtained is apparently unwise. Far better to go slowly, study and investigate the entire situation and the means of betterment—survey the field before starting to build—then only can we be at all assured of getting all that we now think we want, but can only vaguely express by saying, take the eleemosynary institutions out of political control.

Humboldt Building.

TWO ODD CASES OF FOREIGN BODIES IN THE BLADDER

CLARENCE MARTIN, M.D.
ST. LOUIS

One doing urological practice cannot but be struck by the comparatively large number of patients who, for one reason or another, introduce foreign bodies into their urethral canals, and then losing control of the object permit it to slip further along until it reaches the bladder. Some of these patients employ the object for purposes of urethral titillation, ordinary masturbatory procedures proving insufficient, or the patient wants to try something new. New pleasures are ever popular in this prosaic world of ours.

Owing to the shortness of the female urethra, a condition facilitating their introduction, foreign bodies in the bladders of women are commoner than in male bladders. Then again, the proneness of some women to resort to attempts to bring about abortion in the privacy of their own rooms and guided entirely by the sense of touch, accounts for some of the bodies introduced into bladders, and in a manner "absolutely unknown" to the sufferers.

A boy, 19 years of age, was referred to me by Dr. J. Hethcock of Morehouse, Mo. Three years previously the boy began to complain of pain in the bladder and increasing urgency and frequency of urination. During this period and up to the time of coming under Dr. Hethcock's care, several physicians had treated the patient for "catarrh of the bladder," cystitis, etc. Dr. Hethcock sounded the boy's bladder and

easily detected a stone. Thereupon he referred the patient to me for treatment. A cystoscopic examination disclosed a large phosphatic stone.

The boy admitted that for some years he had masturbated rather frequently. Three years before, at the age of 16, on one afternoon while engaged in this pleasant pastime, the happy thought possessed the boy to take a piece of chewing gum from his mouth, roll it into the form of a pencil and introduce it into his urethra.

During the subsequent manipulation to which the pencil of gum was subjected, it broke into two pieces. Thoroughly alarmed, the young fellow made frantic efforts to work the fragment from his urethra. His efforts merely forced the piece of gum further back into the canal until finally it reached the bladder. He

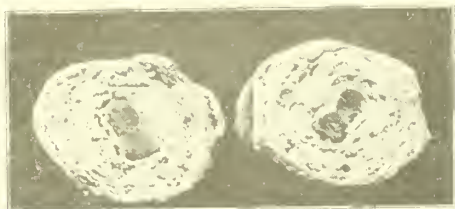


Fig. 1. Phosphatic stone, sawn in two, showing nucleus of chewing-gum.

told his parents nothing. In a few days following the unhappy accident, bladder symptoms began and continued to increase in severity until coming under my care—three years later.

The stone was removed through a suprapubic incision done under local anesthesia (one-half per cent. solution of novocain). It was a soft, friable phosphatic concretion measuring 1 by 1½ inches. On being sawn in two the nucleus of the stone was found to be a soft piece of chewing gum. The illustration shows it nicely.

A girl, 15 years of age, was referred to my service at the St. Louis City Hospital from the medical service for treatment for an intensely painful cystitis. I found the girl suffering from great urgency and a



Fig. 2.—Rubber catheter, encrusted with urinary salts, removed from girl's bladder.

fifteen to thirty minute frequency. The urine was foul. Owing to the violent cystitis, which prevented sufficient distension of the bladder, cystoscopy was unsatisfactory, but a view was secured of what seemed to be two or three stones. A foreign body was plainly felt upon introduction of the instrument. The Roentgen ray showed a large, peculiarly shaped shadow in the bladder region.

The girl was etherized and litholapaxy attempted, but it was impossible to distend the bladder and the jaws of the lithotrite would not grasp the body which could be plainly felt. The urethra was then dilated and the index finger introduced. A soft rubber

catheter, encrusted with urinary salts, was easily made out. After some manipulation the finger was crooked in a bend of the catheter and it was withdrawn. On withdrawal from the bladder the catheter retained the shape it had taken in the bladder as shown by the illustration. It had lost its elasticity and was coated with phosphatic encrustations.

The following day the dilated sphincter muscle had regained its tone, and in a few days under irrigations with solutions of nitrate of silver, the vesical symptoms disappeared.

What appeared cystoscopically to be two or three stones was the appearance given by the doubling of the catheter two or three times on itself, the elbows thus produced giving this impression.

The girl subsequently questioned, strenuously denied all knowledge of the introduction of the catheter for any purpose but when she confessed that four or five months before she had been pregnant and had gone to a midwife for aid, it became obvious that some unskilled hand had made an effort to introduce the catheter into the pregnant uterus and, unfortunately for the girl, had entered the wrong opening. The catheter had been in the bladder for four or five months easily. Its condition showed that.

3700 Morgan Street.

DOCTORS TO RATION THE NATION

My hint to you, doctor, is that the food economies practiced in the war, particularly those by Germany herself, indicate that vast savings can be made here by cutting down the ration of the individual and that the result is beneficial to health rather than otherwise. We cannot have in this country any system of rationing such as has been applied in Germany. It would seem preposterous to propose it. But we can simulate it; at least the practicing physician can. He is about the only person we Americans will listen to in such matters. He commonly puts us on a diet when we get sick. He knows the value thereof and he knows the heavy penalties of overfeeding and its train of ills. He is, therefore, in a unique position to be a leader in food conservation in this crisis.

If individually and as a whole, through their medical associations, the physicians of the country would realize their opportunity and take every possible occasion to advise their patients to reduce their food intake, the saving in the aggregate would be tremendous. It is a matter, it would seem, that is worthy of being taken up officially by the various medical organizations with a view of securing concerted action.

There is no space here to enter into a full discussion of what has been done abroad. But a few facts will suggest a line of thought.

According to Dr. M. Hindhede of Copenhagen, one of the greatest nutrition experts in the world, the death rate among German men before the war had risen to 18.2 a thousand per annum. He attributes this largely to the fact that in the preceding fifty years the German had become the world's champion meat eater. Dr. Hindhede believes that 10 per cent. of protein is sufficient, and he is a believer in fewer calories than prescribed in the old standards.

In the war the death rate in Berlin last fall had fallen to 12. London, even before she adopted rationing, and while still under the mere restriction of high prices, had achieved a like result. In Belgium, while it was still under the efficient management of the American Relief Commission, the astoundingly low rate of 8 was attained. And according to Horace Fletcher, food economist, who as a member of the commission, was partly instrumental in the adoption of the food prescription in force in Belgium, the common diseases of civilization were all but eliminated. Compare the above with the death rate in New York City before the war, 14.2, claimed as a world's record. —*Medicine and Surgery.*

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OF THE

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EDITORIALS

JOURNAL LATE IN MAILING

Most of our members know that our JOURNAL is printed at the American Medical Association headquarters in Chicago. This courtesy on the part of the American Medical Association enables us to present a journal more free from errors than if printed in an ordinary print shop, and is an economy to the Missouri State Medical Association because THE JOURNAL is printed by the A. M. A. practically at cost. In ordinary times it required thirty-six to forty-eight hours for THE JOURNAL to reach us after being shipped from Chicago, and usually another twenty-four hours to obtain it from the freight office, stamp, route and mail it. Thus THE JOURNAL usually appeared somewhere between the fifth and fifteenth of the month. During the past two months the government has ordered railroads to sidetrack all non-essential freight and our JOURNAL comes within that category because it is shipped in a car loaded with miscellaneous freight. The January number is much later than usual not only because of this unusual condition in freight traffic, but because of the sickness of the editor and the consequent delay in assembling the material for the January number.

We trust the members will be patient with us in the future as we cannot assure them that THE JOURNAL will appear at any regular date, although the American Medical Association will do its part, in spite of the fact that it also is now very heavily burdened with extra work on account of the war.

WAR SCHOOL OF SYPHILIS, SKIN AND VENEREAL DISEASES, AND GENITO-URINARY SURGERY AT ST. LOUIS

The medical facilities of Missouri have been observed by the Surgeon-General of the Army, although it has been the habit of the profession in our state to go ahead with its progress and make very little noise about it. The establishment of the School of Oral and Plastic Surgery at Washington University in St. Louis and the

Roentgen-Ray School at Kansas City were the first indications that Missouri had been chosen as headquarters for important work. Now comes an order from the Surgeon-General to establish a school for instruction of medical officers of the Army in the treatment of syphilis, skin and venereal diseases, and genito-urinary surgery. This school will be directed by Drs. Martin F. Engman and John R. Caulk, and Dr. Ernest Sachs as secretary, with headquarters at Washington University Medical School. Instruction will be given at the Barnard Free Skin and Cancer Hospital, as well as in the clinics at the St. Louis City Hospital, Barnes Hospital and Washington University Dispensary and class rooms.

The course of instruction will extend over a period of about one month, after which the officers will be assigned to various camps. The mornings will be devoted to genito-urinary work while instruction in syphilis and skin diseases will be given in the afternoons.

This is the second school of the kind to be established by the Surgeon-General, one other school of this nature having been opened in New York City.

The staff of the St. Louis school consists of Drs. M. F. Engman, J. R. Caulk, George Ives, Richard S. Weiss, A. H. Conrad, V. V. Wood, R. Buhman, George Dock, M. Kasak, Wm. R. Robertson, H. G. Greditzer, Sherwood Moore and O. R. Sevin.

KANSAS CITY ROENTGEN-RAY SCHOOL FOR ARMY SERVICE

In order to standardize the roentgen-ray work in the United States Army nine schools have been established in the United States to the end that Medical Reserve Officers assigned to the roentgen-ray service may thoroughly understand the necessity of some degree of uniformity in Army roentgen-ray work. The places of establishment and the commanders of the schools are:

Kansas City, Capt. E. H. Skinner, M. R. C.
Boston, Major A. W. George, M. R. C.
New York City, Majors J. S. Sherare, L. G. Cole, L. T. LeWald, M. R. C.
Philadelphia, Major W. F. Manges, M. R. C.
Baltimore, Major F. H. Beatjer, M. R. C.
Richmond, Major A. L. Gray, M. R. C.
Pittsburg, Major G. A. Johnson, M. R. C.
Chicago, Capt. E. S. Blaine, M. R. C.
Los Angeles, Capt. W. B. Bowman, M. R. C.

The Kansas City school was established the latter part of July with an initial enrollment of four officers. This number was rapidly in-

creased until at the present time the class is composed of twenty-two officers. Twelve officers have completed the course and been certified to the Surgeon-General for assignment to roentgen-ray service. Many other officers have been at this school for short incomplete periods of instruction. The course varies from a few weeks to three months, depending upon the proficiency which the officer exhibits and his adaptability to army methods. While the course puts more stress on the localization of foreign bodies, yet the study embraces the entire field of roentgenology, but with little reference to gastro-intestinal examinations and roentgen-ray treatment.

A feature of this school is the large amount of practical work which is afforded by the use of the Kansas City General Hospital Roentgen-Ray Clinic, the private laboratory of Captain Skinner, and various other laboratories of the city especially at St. Luke's Hospital. The curriculum embraces the following subjects:

1. Study of Army rules and regulations, both medical and military.
2. Physical exercises and military drill.
3. Technical work which covers the study of motors and transformers, mechanical difficulties, wirings and roentgen-ray limitations, positions and exposure technic, Coolidge tube control and how to handle work rapidly.
4. Dark room technic, chemistry of development of sensitive plates, apparatus required and dependable methods.
5. Dangers and precautions, especially for fluoroscopy.
6. Plate interpretation, with emphasis on injuries and diseases of the osseous system, diseases of the teeth and accessory sinuses. Particular attention is paid to diseases of the lung, and there is an attempt to cover the entire body.
7. Localization of foreign bodies represents the most important feature of the course. The student must familiarize himself with the following methods:
 1. Sutton's trocar and canula method.
 2. Synchronous parallax.
 3. Thruston Holland's triangulation method.
 4. Hirtz Compass.
 5. Mackenzie-Davidson cross-wire method.
 6. Use of the profandometer.
 7. Sweet's method of localization of foreign bodies in the eye.
8. The transfer of localization findings from the roentgenologist to the surgeon.

These various methods are studied upon wax models representing the different parts of the

body. Foreign bodies are placed in these models at known depths and the student is required to localize these with such exactness that the source of error is only a small fraction of an inch. By the use of the Sweet-Bowen method foreign bodies in the eye may be localized with a possible error not exceeding one millimeter.

The Sutton method, which was devised by the late Dr. W. S. Sutton of Kansas City during his work in the French hospitals, has proved to be the simplest and most practicable. In this method very few instruments are required, no calculations are to be made and almost always the operation may be performed under local anesthesia. The method in abstract is: The shadow of the foreign body is located by means of the axial ray on a large screen which is supported some 6 inches above the surface of the part to be examined. The surface is then painted with iodine, cocainized and a small incision made in the center of the shadow. A special sterilized cannula bearing the blunt or sharp trocar, as circumstances may indicate, and held by a strong clamp at right angles, is then entered through the skin incision. The room is then darkened, and under the guidance of the roentgen ray the instrument is driven through the tissues, the point striking the foreign body. The current is now cut off, the screen removed and the room lighted while the operator continues to hold the trocar immovable. Next, the trocar is withdrawn from the cannula and one of the small, hooked, piano-wire indicators inserted in its place. Holding the hook of the latter against the foreign body, the canula is then drawn and the wire snipped off $\frac{1}{4}$ inch above the skin. A dressing is then applied and the patient is ready for the surgeon. On the operating table each indicator may be readily followed to the corresponding foreign body.

The average roentgenologist has very little practical knowledge of the localization of these foreign bodies, so the appointment of roentgen-ray men into the Army service direct from civil life without special instruction would result in chaos. This was a theory when the schools were established, but developed into a proven fact after a few weeks' operation.

These schools constitute an indispensable factor to the man who has had little or no roentgen-ray work, and are equally valuable to the advanced student who quickly grasps the importance of a review enabling him to discard some things that are worthless and assimilate much that is vital to his success not only in the Army, but in future civil practice.

DISTINGUISHED SERVICE

During the years that the Honor Roll has been in existence there has been quite a noticeable and growing spirit of friendly rivalry among the secretaries of county societies for first place. When it was announced in 1914 that we would establish the Honor Roll, Madison County Medical Society attained the distinction of first place in 1915. In 1916 Webster County Society was the first to earn the distinction, while Wright County took the palm in 1917. For 1918 one of our smallest but most faithful societies leads the list—the Taney County Medical Society—only four days ahead of Webster County Medical Society, which is one of the few that have been on the Honor Roll every year. The county societies which have earned mention for distinguished service in being on the Honor Roll every year since its establishment are: Adair, Dr. J. W. Martin, secretary; Benton, Dr. J. R. Smith, secretary, 1915-1917, and Dr. H. G. Savage, secretary, 1918; Madison, Dr. C. S. Slaughter, secretary; Platte, Dr. A. S. J. Smith, secretary, 1915, Dr. A. S. Herndon, secretary, 1916, Dr. Spence Redman, secretary, 1917, and Dr. S. L. Durham, secretary, 1918; Ste. Genevieve, Dr. R. W. Lanning, secretary, 1915-1916, Dr. L. J. Birsner, secretary, 1917, and Dr. G. M. Rutledge, secretary, 1918; Schuyler, Dr. J. B. Bridges, secretary; Webster, Dr. J. R. Bruce, secretary.

All members of the Association fully recognize the invaluable service the secretaries of the county societies perform and are quite well aware of the fact that without a live, energetic, interested and persuasive official in this office the county society somehow seems to slip backwards. It is therefore an additional gratification to the officers of the Association to know that besides the seven societies which have been on the Honor Roll for four years there are seventeen that have been on the Honor Roll three years, twenty-two for two years and twenty-nine for one year, leaving only twenty-seven societies out of the ninety-eight which have not as yet attained a position in the list.

At the end of 1915 there were thirty-seven societies on the Honor Roll. At the end of 1916 thirty-eight had earned the distinction, while at the end of 1917 fifty-four societies had gained this honor. Four of these, Cole, Macon, Newton and Butler-Stoddard reported a completed roster of paid-up members too late to be published in the December issue of THE JOURNAL.

For 1918, the Association starts off with an Honor Roll of ten counties which have paid for every member. This exceeds the number at the beginning of any previous year. Several societies have almost earned the distinction, but the negligence or oversight of one or two or three members holds the entire society from a position on the Honor Roll at this writing.

It is to the county society secretaries that a very large part of the credit is due not only for our success in the past, but for the assurance that our Association will continue its service to mankind and its benefits to our members.

LOYALTY OF THE DOCTOR

There are three essentials for the successful prosecution of a war: (1) men, (2) food and munitions, (3) doctors. The mobilization of the men of this country for the great conflict in which we are now involved required the draft. The provision of food and munitions was accompanied by many delays and rearrangements of methods, but the provision of doctors required no draft and the response to the call was prompt and plentiful. Commenting upon this subject recently, the *St. Louis Star* says of the medical department of the Army that it is as yet unheard of in a critical way during this crisis, while in 1898 (during the Spanish-American War) that department was subject to as much deserved criticism as others, but that it is not being criticized today because at its head is Major-General Gorgas, a man of such professional reputation and achievement that he has the respect and confidence of the entire medical profession of the country. The doctors have rallied to his aid, continues the *Star*, and he is broad enough and wise enough to ask for it and profit by it. Men of the highest medical and surgical skill of the country have become his advisers. To quote further:

"No other class of citizens, representing any business, profession or calling, has made such a contribution in proportionate numbers as the medical profession. Nor has any class as individuals sacrificed so much. Every doctor who is in the service volunteered, and, with the exception of a few very recent graduates, gave up an established practice yielding much more than the army pay, and will have, when he returns to private life, to begin all over again to build up a practice. Some of them at about 50 years of age have sacrificed the business built up in a lifetime and can scarcely hope to get it back again. All this is being done in the highest spirit of patriotism and of loyalty to the ideals of the great healing profession."

Last month we suggested in a rather incidental fashion that physicians of standing and physical ability in Missouri should apply for commissions without regard to the necessities of the service. We believe now that every physician under 55 years of age who is physically and professionally qualified to offer his services to the country should accept a commission. There is no telling how long this war will last, but there is one certain, definite and determined spirit animating the American people and that spirit is, we must win this war. The war cannot be won without a plentiful supply, even an oversupply of competent physicians, and every specialist will find a field for his peculiar talents.

It is of course true that in such a large body of men as that which composes the medical profession there will be found a few who are so selfish and so devoid of an enlightened conception of what loyalty means that they will refuse to volunteer their services. Such men stand out among their fellows as undeserving persons and will receive their just deserts as time passes on.

There are, however, members in our profession not permitted to give their services to their country, although they are willing to do so, either because they have passed the age limit or because of some physical disability. These men will serve their country no less loyally and efficiently than the doctors who go to the front, because there must remain at home a sufficient number of doctors to render service to the communities in which they live. Not only will these physicians minister to the sufferings of the people at home, but they have pledged themselves to give back to those who have left home and practice a certain proportion of the fees collected for medical services in families that would ordinarily be served by the absent member. Thus in every possible manner the loyal physicians compelled to remain at home will exhibit in the highest degree the spirit of loyalty that animates every true, red-blooded, honest individual.

CARE OF ENLISTED MEN BY THE AMERICAN RED CROSS

Every physician will be interested in the plan of the American Red Cross for the care of families of enlisted men. Each of the thirteen divisions of the American Red Cross has a division director of civilian relief corresponding to the Director-General of Civilian Relief at Washington. The Southwestern Division is composed of Missouri, Arkansas, Texas, Kansas and Oklahoma, with headquarters at St. Louis.

Each Red Cross chapter has appointed a Home Service Section of the Committee of Civilian Relief, and it is the duty of this section to see that no soldier's or sailor's family suffers because a member of it has gone to the front. These sections are rapidly qualifying themselves to give advice and counsel, and if necessary, financial assistance. They are usually made up of seven members and very often a physician is asked to serve as one of the members. Chapters are not asked to assist financially unless the separation allowance made by the government and the man's allotment of part of his pay is not sufficient to provide for the family, when the chapters are asked to make up the deficit out of the chapter's funds. The Government War Insurance Bill is only compulsory in regard to the man's wife and children. Often a soldier will have to be induced to make allot-

ments for his other relatives when they are in need.

There are many opportunities of service that are not financial, such as advice about schooling of children, health of children, health of mother, securing positions for children becoming of working age, attending to legal matter, etc.

These types of cases will show some forms of service.

CASE 1.—Mother with daughter 25, son 22 and daughter 13. Son is drafted. Mother taken dangerously ill, without hope of recovery. Oldest daughter must resign her position, paying \$35 per month, to nurse mother. The soldier's allotment of \$20 only income.

Home Service Section investigated, found an excellent family never in want before, now in dire straits, and needing great assistance. Chapter made a grant of \$10 a week to provide finances for living expenses, medicines, doctor bills, etc., and are making encouraging calls to the family and assisting the daughter in nursing her mother. Financial relief alone would not have been enough in this case.

CASE 2.—Man enlisted in army and married in June, 1917, asked for discharge in October on the grounds of a dependent wife who was an expectant mother. Army officials refused discharge because marriage took place after declaration of war. Woman has no relatives and soldier's relatives, who live in another part of the United States, are unable to assist.

Home Service Section found facts as stated correct, made arrangements for the wife's confinement, assigned a big-hearted motherly woman as counsellor for her, and assisted her with additional funds necessary over and above the soldier's allotment. This was splendid home service for it comforted an expectant mother and by the same effort relieved the worried mind of the soldier father.

CASE 3.—An aged farmer and his wife had two sons, 25 and 22 years old, respectively. The older boy was drafted. Two weeks later the second boy was taken ill suddenly and died. The old folks were distracted, not only because of the loss of both sons, but because they had a growing crop, their only means of support, without any one to gather it.

Home Service Section marshalled the neighboring farmers, gathered the crop, helped to market it, and gave kindly advice and assistance to the old people. That was all that was needed, but it was good home service.

CASE 4.—Referred by Canadian Patriotic Fund. American citizen enlisted in Canadian forces, leaving a wife and four children in United States. Man formerly earned \$150 per month and took excellent care of his family. He made an assignment of \$20 of his pay; the Canadian government made an additional separation allowance of \$20, total \$40 per month. Woman willing to readjust her mode of living, but to drop from \$150 per month income to \$40 per month was impossible without great sacrifice to health and environment of children.

Home Service Section investigated, found an excellent family and enthusiastically recommended grant of \$10 per month to be added to the \$40. This was enough to relieve this woman of the constant worry and fear which was rapidly driving her to a neurotic condition. There will be many cases like this for the Red Cross.

CASE 5.—Referred by commandant of Army post. Soldier had deserted and when recaptured, gave as his excuse that the fear of his wife and three children starving in Chicago, drove him to it.

Home Service investigation showed man well

known to all charities of Chicago because of his absolute failure to support his family and his frequent desertion and long absence from them. Soldier compelled to make an allotment of \$20 per month for their support, and at wife's request (this being her first dependable income from him), man was kept in the army. Our Home Service Report helped the commandant too, for he no longer felt like a brute in handling this "poor man" and began at once to make a real man out of this soldier.

Other examples might be given to show the need of safeguarding women and children from harmful labor, arranging for proper housing and necessary medical attention, protecting lonely and inexperienced young wives, securing the best legal advice and other needs of vital importance to a normal family life.

Every physician can feel assured that the Red Cross Chapter of his community will be interested in every family of a soldier or sailor that may be in need of any of the forms of service which the Home Service Section of the Chapter is prepared to give. Many physicians will see in this Red Cross activity an opportunity for service that will go far to keeping the rising generation protected and safe until they are ready and competent to take their places in the world's activities.

GOVERNMENT CAMP AT NEVADA, MO.

A movement seems to be on foot for the establishment of a new camp in this section of the country, and the Chamber of Commerce of Nevada, Mo., has taken steps toward inducing the government to establish a camp at Nevada. This would be a most excellent location for a camp. There is already in existence much equipment in the way of buildings and grounds for the rapid assembling of a training camp at Nevada, and the town is located on a trunk line railroad with a branch from another railroad. The highway from Nevada to the grounds where the camp would be situated is in splendid condition and when the matter is considered it seems somewhat strange that the government has not already established a training camp at this town. Another very important consideration in the selection of a training camp is the fact that the city of Nevada is not a large city, and while the sale of liquor is not prohibited in the corporate limits of the town, the number of saloons is very limited and the number of immoral women is correspondingly small. While of course the establishment of a camp always attracts a crowd of hangers-on, the government could easily prevent a camp at Nevada from becoming infested with a large number of lewd women, bootleggers and other degraded persons who seek to make money out of the sorrows and afflictions of people and catastrophies that might overwhelm our country such as now has assailed us. At Nevada there would not be the horde

of saloons and drug stores selling liquor to the soldiers illegally, nor a ring controlling large number of prostitutes and boot-leggers which have caused the government to institute severe measures against Seattle and Kansas City in order to protect the men at the training camps near those places.

OBITUARY

HENRY L. PORTER, M.D.

Dr. Henry L. Porter of Seneca, Mo., a graduate of the Homeopathic Medical College of Missouri, 1880, and later from the regular school, died at St. Louis, Nov. 16, 1917, following an operation for prostatic trouble. Age 68 years.

Dr. Porter was an active member of the Newton County Medical Society, serving as its president from 1910 to 1913, and has been delegate to the annual meeting of the Missouri State Medical Association for the last three years. He had traveled extensively through Egypt and the Holy Land. He was a thoughtful student and possessed one of the best libraries in the southwest section of the state. As a man, Dr. Porter was modest and retiring in his disposition, but nevertheless firm and decisive in his opinions. His judgment was unusually good, and his deep knowledge of human nature enabled him to exercise a wide influence in his community for the best interests of the people. As a physician he was devoted to his patients and loyal to the profession, so that his loss will be mourned by a wide circle of friends and patients. Through his death the Association has lost a wise councilor and devoted adherent to the purposes of our organization.

NEWS NOTES

DR. C. W. SWOPE, formerly of Wichita, Kan., has become an associate with Dr. E. H. Skinner of Kansas City, in the practice of roentgenology.

CAPT. HARRY M. MOORE, a member of the St. Louis Medical Society, now in active service with the Medical Reserve Corps, has been appointed a Major with rank from Nov. 17, 1917.

DR. O. J. RAEDER, assistant superintendent of the City Sanitarium, St. Louis, has resigned his position to study neuropathology at the Boston Psychopathic Hospital under Dr. E. E. Southard.

DR. JOHN R. CAULK of St. Louis was elected secretary of the Surgical Section of the Southern Medical Association at its meeting in Memphis, Tenn., November 12-15. The term of office will be for two years.

DR. J. J. EVANS of Manes, being forced by a paralytic stroke to retire from practice, has been elected an honorary member of the Wright County Medical Society. He has been a member since the organization of the society.

MAJOR W. H. LUEDDE, Capt. R. E. Schlueter and Capt. H. Unterberg, all of St. Louis, attended the meeting of the Southwest Missouri Medical Association held at Springfield, November 22, 1917, and were elected honorary members of that body.

DR. DANIEL N. EISENDRATH of Chicago was a guest of the Medical Society of the City Hospital Alumni of St. Louis, December 6, and delivered an oration on "A Plea for Better Team Work Between the Surgeon and Internist in the Surgery of the Bile Tract."

At a meeting of druggists from several states in the Missouri Valley recently a resolution was adopted urging druggists to restrict the sale of patent medicines containing large amounts of alcohol and prevent these articles as far as possible from being used as intoxicants.

THE personnel of the medical advisory boards for Missouri has been completed and the names supplied to the Governor by Dr. John Young Brown, medical aide to the Governor. In all, 103 boards were appointed, consisting of from three to five members chosen for the most part from lists supplied by the county medical societies. Wherever possible, hospitals were made the headquarters of the boards in order that laboratory facilities may be available.

DR. R. J. TERRY, professor of anatomy Washington Medical School, St. Louis, suffered a fracture of the patella several weeks ago when he slipped and fell while running to catch a street car. He has improved rapidly and is expected to be well within about two weeks.

DURING November the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-

official Remedies: Farbwerke-Hoechst Co., New York: Salvarsan.

Borcherdt Malt Extract Co.: Borcherdt's Malt Sugar.

CAPT. JOHN G. HAYDEN of Kansas City, a member of the Medical Reserve Corps, has been desperately ill with pneumonia for some time, having been stricken while taking a course in neurologic surgery at the University of Pennsylvania. Recent reports of his condition state that he is out of danger.

DR. A. B. MILLER of Macon had a narrow escape from serious injury, when the front wheels of his automobile ran into an open gully, the bridge having been broken down by a traction engine and left in that condition. He managed to stop his car on the brink, though the front wheels were extending over at least a foot.

ONE hundred American Army Surgeons have been organized by the Surgeon-General of the Army for service in the hospitals of Roumania. This is the first detachment of medical officers to be sent for service abroad other than with the French, British or American forces. The detachment is under the command of Col. Walter D. McCaw and will report to the American Minister at Jassy, Roumania.

THE Hygeia Hospital of Chicago, conducted by Dr. W. K. McLaughlin, has been one of our advertising patrons for quite a while and has recently found it necessary to move to new and larger quarters. Dr. McLaughlin writes that some patients have failed to reach the hospital since their removal because the new address was not furnished to the patients, so we request physicians who may be sending cases of drug addiction and alcoholism to the Hygeia Hospital to make special note of the new address which is 4733 Vincennes Avenue, Chicago. The old building is being dismantled, and notwithstanding that signs at the old address plainly direct patients to go to the new number, the presence of wreckers dismantling the old structure caused some patients to overlook the signs and return home without asking the location of the hospital.

A MEMBER who has joined the Army desires to dispose of his practice. It is in a town of ten business houses, a bank, three churches, four-year high school with modern equipment, and twenty-four hour electric service. There being no drug store, he carries a prescription

stock. He is the only physician there and would sell his home and office, built for a doctor's work, on easy terms. Address inquiries to the Secretary-Editor. _____

JACKSON County Medical Society recently ordered a service flag for its office and it was dedicated with appropriate ceremonies at the regular meeting of the society, December 11. The flag contains 151 stars, that number of members having joined the colors, out of a total membership of less than 400. The flag will contain one gold star to represent the death of Dr. W. T. Fitzsimmons, killed in the explosion of a bomb dropped from a German aeroplane upon the hospital where he was serving.

THIS is the time of year when members should go over their accounts and attempt to collect amounts due, especially amounts that are overdue. Every physician has some accounts that are neglected by people perfectly able to pay, yet most doctors seem to have an antipathy toward pushing collections of accounts. In our advertising pages we present the announcement of the Publishers' Adjusting Association, which is a company that we have found always fair in its dealings with the physician and the patient. We suggest that members needing the service of a reliable collection agency correspond with the Publishers' Adjusting Association.

IN the list of officers of the state medical association holding commissions in the Army published last month we have learned that vice-president Dr. Frank B. Long of Sedalia should have been included. He holds a commission as first lieutenant and is now in France. Our treasurer, Dr. Gail D. Allee of Lamar has applied for a commission, but he has been a member of the local board for Barton County from the beginning of the mobilization of our forces, and these duties have kept him so busy that it is not likely that the Government will call him into active service in the Medical Reserve Corps until about March 1, at which time he expects his present work to be completed.

IN commenting on the election of Dr. Elsworth S. Smith, Jr., to the presidency of the St. Louis Medical Society on Nov. 26, 1917, *The Bulletin* says:

Dr. Smith has done his duty to the profession in his private life by devoting himself arduously and assiduously to the acquirement of medical knowledge, and has unselfishly given others the benefit of his labors as an earnest teacher, a conscientious consultant and a painstaking contributor to scientific literature. His election fulfils a laudable ambition to follow in the footsteps of his honored father, who served the society as its president in 1872 and whose life has been a

potent factor in influencing many of the most successful medical men of today. The other officers were: first vice president, Phelps G. Hurford; second vice president, Rudolph Buhman; secretary, Arthur Gundlach; councilors, Malcolm A. Bliss, Paul Y. Tupper, Albert H. Hamel and Frederick C. Baldwin.

SURGEON-GENERAL WM. C. GORGAS passed through St. Louis en route to Washington, D. C., December 13, after completing an inspection tour of the various cantonments. He was accompanied by Major Victor C. Vaughan, Major Wm. H. Welch of the Medical Reserve Corps and Colonel D. C. Howard of the Army Medical Corps. A dinner in honor of the distinguished officers was given at the St. Louis Club by members of the Army Medical Corps, the Medical Reserve Corps and civilian members of the St. Louis Medical Society. General Gorgas said he found that measles was the most troublesome disease at the camps and a number of deaths had occurred due to pneumonic complications. Meningitis was also present, particularly at Camp Funston. The party passed through Kansas City on their way to Camp Funston, December 6, where they were the guests of Major Binnie of the General Medical Board, at a dinner given in their honor at the University Club.

ON Dec. 3, 1917, the American Red Cross opened another hospital in France. This institution will be devoted to the care of tuberculous patients. It is the Ste. Eugenie Hospital at Lyons and forms a new link in the chain of hospitals which America is forging for the relief and restoration of the health of the unfortunate French people. The hospital was opened in the presence of officials of the American Red Cross, the Rockefeller Foundation and the French authorities. The hospital building is loaned to the American Red Cross by the hospital board of the city of Lyons which supplies the building with light, heat, water and sanitation without cost to the Red Cross, and will also supply food, linen and disinfectants at cost. The Red Cross provides the physicians, nurses and hospital attendants. Many tuberculous repatriates have returned home from territory recovered by the French army, and these people soon spread the disease among their friends, so that the situation as regards tuberculosis is quite serious. The new hospital will care for 200 patients and more hospital barracks can be erected. The chateau was presented to the city of Lyons by the Empress Eugenie. Within two weeks after the agreement between the hospital board of Lyons and the American Red Cross had been signed the hospital was equipped with a staff of physicians, nurses and attendants.

THE Abbott Laboratories of Chicago have been licensed by the government to produce and sell Veronal, the well-known hypnotic that has hitherto been manufactured exclusively by German manufacturers for E. Merck. The name is to be changed from veronal to barbital, although the old name of veronal may also appear on the packages in an explanatory sense. The Abbott Company is required to pay to the Alien Property Custodian 5 per cent. of its gross receipts on the sale of the drug, and the Federal Trade Commission reserves the right to fix the prices and judge at all times of the quality. The pre-war price of veronal was \$25.50 per pound, but has sold as high as \$40 per pound. The Abbott Company believe they can make it at \$20 per pound and sell it at a 15 per cent. profit.

Novocain is another German-made drug which the government has granted license for manufacture in this country under similar conditions as those imposed upon the Abbott Laboratories on the manufacture of veronal. The Rector Chemical Company, New York City, and the Farbwerke Hoechst Company of which Herman Metz holds all the stock, were licensed to sell novocain, but the name of the drug is changed from novocain to pro-caine. The price of pro-caine before the war was \$52 per pound, but a sale made a few weeks ago brought \$720 per pound. The Rector Company believes it can manufacture pro-caine at \$65 per pound, and agrees to sell it at about \$95 per pound.

THE annual meeting of the Western Surgical Association was held at Omaha on December 14 and 15 under the presidency of Dr. Leonard Freeman of Denver. The attendance this year was slightly smaller than usual because so many men are in the Army, but on account of the war a good many war topics were introduced. The meeting was addressed by Mr. Frank A. Vanderlip, director of the War Savings Committee, who urged economy in every branch of life and laid great emphasis upon the point that every dollar spent in luxury was a dollar spent in aid of the German Army. The Council for National Defense, Medical Section, selected Dr. Jabez N. Jackson of Kansas City to speak upon the war and war topics. Dr. Jackson gave an eloquent and well balanced address upon the duty of the medical profession and of the people throughout the country. He spoke of the difficulty of securing competent medical officers and urged that the medical profession make every sacrifice to furnish the army with the requisite number of medical men to take care of the armies in France.

Probably the most interesting information obtained regarding the war was that given by Dr. Joseph R. Eastman of Indianapolis, who last

year spent eight and one-half months in charge of the American Hospital at Vienna. Dr. Eastman lost 50 pounds in weight during the time he was there. He said they did not have milk, butter, tea or coffee, and the bread was composed exclusively of potatoes and corn held together with straw. At the hospital were 750 patients, and thirty-two eggs was the allowance made for this hospital. Thus it can be readily seen how low supplies must have been running in the Central Powers. Dr. Eastman came home on a small tank steamer from Copenhagen around Iceland and was thirty-two days en route.

In regard to the strictly medical aspect of the meeting, a number of very interesting papers were presented, one by Dr. D. N. Eisendrath of Chicago, on some of the newer aspects of the surgery of biliary tract. Dr. R. G. Corwin of Pueblo, Colo., gave a most interesting contribution on the conduction of hospitals, in which he urged most forcibly that the profession take steps to see that only competent men were permitted to perform operations. Dr. Emil G. Beck of Chicago made a most valuable contribution on the treatment of lung abscesses and chronic osteomyelitis, and Dr. Frank G. Nifong of Columbia, Mo., made a forcible plea for the renaissance of the Hodgen splint in the treatment of fractures of the femur. A very valuable paper by Dr. E. S. Judde of Rochester, Minn., dealt with the anomalies of the ureter, and a paper on "Some Tumors of the Neck," by Dr. E. G. Hare of Minneapolis proved very interesting and instructive.

The association adjourned to meet next December in San Antonio, Tex. Officers elected for the year are: Dr. J. F. Percy of Galesburg, Ill., president; Dr. D. N. Eisendrath of Chicago, first vice-president; Dr. D. C. Brockman of Ottumwa, Ia., second vice-president; Dr. Arthur T. Mann, secretary and treasurer.

THE State Committee of National Defense, Medical Section, recently arranged for a dinner in honor of the Missouri Congressional Delegation, Dec. 27, 1917, to discuss important medicomilitary legislation. Associated with the committee were representative men from the various professions. It was held at the St. Louis Club with a large attendance and manifestations of great interest on the part of all present. On account of engagements in Washington and elsewhere only two of Missouri's delegation of congressmen were present, Representatives L. C. Dyer and J. E. Meeker.

The dinner was opened with an invocation by Right Reverend D. S. Tuttle, presiding Bishop of the Protestant Episcopal Church. After the dinner the chairman of the State Committee, Dr. H. G. Mudd, introduced Dr. Jabez N. Jack-

son of Kansas City as toastmaster. Dr. Midd also read a letter of regret from Governor Gardner regretting his inability to attend and expressing his admiration for what the medical profession was doing for the Army and promising his earnest cooperation in their every effort.

The toastmaster's remarks in introducing the discussion were full of valuable information, the result of personal experience in the Spanish-American War. His arguments and conclusions presented the urgency of legislation granting to the medical officers in the Army and Medical Reserve Corps when in service much needed rank and authority.

The first speaker introduced was the Hon. L. C. Dyer, who spoke in detail, and very ably, concerning the purposes of the Owen amendment as embodied in a bill which he recently introduced in the House of Representatives. He referred to the fact that the Medical Corps of the Army deserved the same opportunity for higher rank already accorded to medical officers in the Navy; that this need was most apparent now when our medical officers are compelled to meet and consult with medical officers in the British and French armies where these higher ranks were given to medical men. He had added a provision for the admission to the Army Medical School of selected officers of the Medical Reserve Corps after one year of active service. Upon passing satisfactorily the required examination, they become eligible for appointment to vacancies in the regular medical corps of the Army. Mr. Dyer's address was received with close attention and applause.

The toastmaster then introduced representatives of the press, the first being Mr. Wm. Marion Reedy, editor of *Reedy's Mirror*, who spoke very interestingly on the work of the physician and surgeon, and pledged his support to any measure that will grant the necessary authority for further improvement in the management of medical matters which concern the Army.

The toastmaster was singularly happy in his remarks in introducing the Right Reverend J. J. Glennon, Archbishop of St. Louis, who formerly resided in Kansas City. Archbishop Glennon's address was a masterpiece of eloquence and philosophy. He referred to the inseparable relation between health and morals, and stated that physicians and teachers of morality and religion were working for the same end—the conservation of life and happiness. He likewise pledged his support to the medical profession in its effort to make military medicine more effective by granting higher rank to medical officers.

Short but excellent talks were made by Capt. H. L. Wells, who had seen service in the Philippines with the volunteers during the Spanish-

American War; Col. T. U. Raymond, Medical Corps of the Army; Mr. H. P. Robbins, and Mr. John Schmoll, director of public welfare.

Mr. Dyer, both in his address and privately, referred to the need for calling the attention of the President personally to the importance of this legislation. He suggested that prominent physicians from various states form a committee to wait on the President in this matter at an early date, as the medical officers were not able to present their personal conclusions in these matters.

MEMBERSHIP CHANGES, DECEMBER

NEW MEMBERS

Albert F. Bina, St. Louis.
 Horace F. Cleveland, St. Louis.
 A. Gordon Eddlemon, Iantha.
 Anson H. Gifford, Springfield.
 George J. P. Gish, Mindenmines.
 Frank W. Haynes, St. Louis.
 Benjamin Y. Jaudon, St. Louis.
 William E. Jose, St. Louis.
 E. B. Kessler, St. Joseph.
 H. S. Langsdorf, St. Louis.
 Franklin W. Lester, St. Louis.
 W. R. Limbaugh, Hollywood.
 Paul S. Lowenstein, St. Louis.
 John O. Mitchell, Branson.
 Irwin Henry Schmidt, St. Louis.
 Clarence A. Smith, Liberal.
 J. W. Stewart, St. Louis.
 William L. Turner, Galloway.

CHANGE OF ADDRESSES

Mary J. Atherton, Springfield to Junction City, Kans.
 E. J. Butzke, St. Louis to Bowling Green.
 Jacob R. Heryford, Pickering to Salina, Kans.
 E. E. Higdon, Olney Springs, Colo., to Allen-ville, Mo.
 James Lewald, St. Louis to Philadelphia, Pa.
 Nathan E. McAlister, Joplin to Portland, Ore.
 A. H. Myerdick, Linmar Hotel to 3942a Westminster Pl., St. Louis.
 C. L. Ramsey, Napoleon to Wellsville, Kans.
 P. S. Tate, Morley to Bonne Terre.

TRANSFERRED

W. K. Statler, Sedgewickville Tr. to Iowa Society.
 Isaac H. Odell, Enterprise, Iowa.

REINSTATED

Loren G. Shroat, White Sulphur Springs, Mont.

DROPPED

E. F. Higdon, St. Joseph.

DECEASED

Floyd S. Bates, Adrian.
S. A. Johnson, Springfield.
H. L. Porter, Seneca.
Hugo Summa, St. Louis.
Jules F. Valle, St. Louis.

CORRESPONDENCE

PAST FIFTY-FIVE AND NO SLACKER

SPRINGFIELD, Mo., Dec. 18, 1917.

To the Editor:—In looking over the names of Missouri physicians, published in THE JOURNAL, who have applied and taken the examination for the Medical Reserve Corps, United States Army, I failed to see my name among the list.

I made application on June 5, 1917, was examined and recommended for a commission by the local board, but was rejected at Washington because my age was slightly over 55 years. I was very anxious to be commissioned and made a second attempt to get in. Through our Congressman, Mr. Hamlin, an appeal was made to the Surgeon-General, but my application was again declined or deferred.

We have many other doctors 55 to 60 years old who are well preserved, well qualified and as anxious as I am to do something in the great struggle for world democracy. If we are needed we are ready to go.

Yours truly,
F. B. FUSAN,
610 Woodruff Bldg.

DR. W. F. CHAFFIN COMMISSIONED

RAYMORE, Mo., Dec. 17, 1917.

To the Editor:—Since you have asked for corrections in the lists of those who have received commissions in the Medical Reserve Corps, and not seeing my name, I wish to say that I was examined in October and was commissioned November 6, as first lieutenant. I have supported and profited greatly by medical organization from the beginning. This county (Cass) medical society I am proud of because it has practical, broad-minded men in its membership and has honored me with the office of secretary and treasurer, and president, and sent me as a representative to the International Congress on Tuberculosis at Washington, D. C., in 1908.

I regret exceedingly to leave my good home and friends, but I could no longer turn down my country's urgent call, believing that I am entering a larger field of usefulness and experience.

W. F. CHAFFIN.

MISCELLANY

MISSOURI PHYSICIANS EXAMINED FOR COMMISSIONS IN MEDICAL RESERVE CORPS

We publish below the names of physicians who have applied for membership in the Medical Officers' Reserve Corps since the last list was published in our December number. We will appreciate information from any members who discover errors in these lists. We know the list is not complete because we have been unable to obtain the names of physicians examined by some of the examining boards but we are doing the best we can to give prominence and honor to the physicians of Missouri who are responding to the call of the country in the present crisis. Not all the physicians named in these lists have been commissioned as some have been rejected for physical disability and for other reasons. We believe, however, it is proper and right that we publish the names of all who apply whenever we can obtain the correct information. We cannot give the present addresses but we are making an effort to send THE JOURNAL to those who enter the service as soon as we learn their location and will change the address of THE JOURNAL as often as the officer is moved from one station to another. The list follows:

Alford, R. L., Vandalia	Moore, O. A., Columbia
Althaus, Carl Jacob, St. Louis	Moran, Michael D., St. Louis
Armstrong, C. L., Webster Groves	Muench, O. L., Washington
Barlow, Roscoe Leland, St. Louis	Moore, Neil, St. Louis
Bechtold, E., St. Louis	Murphy, John Patrick, St. Louis
Biggs, Frank Lester, Kirksville	Newell, Q. U., St. Louis
Bland, W. W., Vandalia	Nugent, Jesse T., Centralia
Callison, E. C., Kirksville	Oehler, E. F., St. Louis
Cleveland, Horace F., St. Louis	O'Kelly, H. T., Patton
Coughlin, W. T., St. Louis	Olsen, John, St. Louis
Dahms, Gustav, St. Louis	Patterson, W. T., St. Louis
Dearing, B. F., St. Louis	Poore, Carl B., St. Louis
Dillon, Wm. A., St. Louis	Pritchett, Asa B., St. Louis
Draney, Thos. L., St. Louis	Pryor, H. B., Ashland
Dysart, Wm. Patton, Columbia	Reid, Henry L., Charleston
Enloe, E. D., Jefferson City	Rohlfing, Walter A., St. Louis
Farris, David P., St. Louis	Rollens, L. E., Dixon
Farris, Joseph L., St. Louis	Rose, D. K., St. Louis
Fiedler, F. W., Batchtown	Rossen, J. A., St. Louis
Finney, John M., Whitewater	Schmidt, Irwin H., St. Louis
Ford, Edward, Bloomfield	Schumacher, H. W., St. Louis
Frazer, T. R., Commerce	Schwartz, F. O., St. Louis
Gaston, R. E., Webster Groves	Scurlock, Ira L., Caruthersville
Goldstein, M. A., St. Louis	Sell, W. J., Waynesville
Grimm, E. C., Kirkwood	Sevin, O. R., St. Louis
Grove, Culph W., Sedalia	Shankland, W. J., St. Louis
Heid, Lloyd L., St. Louis	Smith, E. M., St. Louis
Howell, W. L., St. Louis	Smith, M. N., Fayette
Hughes, M. R., St. Louis	Sneed, C. M., Columbia
Hume, E. L., New Bloomfield	Suggett, F. C., Ashland
Hutchings, Edgar P., St. Louis	Suggett, O. L., St. Louis
Jaracz, Walter T., St. Louis	Thurman, Fayette D., St. Louis
Kirby, A. C., St. Louis	Thurman, Joseph L., St. Louis
Kirchner, W. C. G., St. Louis	Timberman, DeW., St. Louis
Koessel, Arthur W., St. Louis	Tonelli, G. L., St. Louis
Kopelowitz, Jonas C., St. Louis	Townsend, Vincent F., Maplewood
Landree, James C., St. Louis	Trigg, J. M., St. Louis
Lawrence, C. B., Hallsville	Turek, Alois E., St. Louis
Lockwood, Wm. E., St. Louis	Urquhart, W. H., Holliday
Mallette, Cyrus, Bloodland	Vaughan, John R., St. Louis
May, Henry A., Washington	Washington, L. G., St. Louis
McKay, J. C., Kennett	Welch, Hooper W., St. Louis
Meisch, Henry W., St. Louis	Wenneman, Samuel F., St. Louis
Miller, Chas. H., St. Louis	Wessling, A. L., Martinsville
Miller, Ira Hamilton, Louisiana	White, Jesse B., St. Louis
Miller, T. V., Sikeston	Wittwer, H. S., St. Louis
	Zachritz, George F., St. Louis

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.

ST. LOUIS MEDICAL SOCIETY

Meeting of Nov. 10, 1917

The meeting was called to order at 8:40 p. m., by the president, Dr. Albert H. Hamel.

The minutes of the previous meeting were read and approved.

Dr. E. Lee Myers presented a case of esophageal stricture in child with operation.

Dr. C. H. Neilson introduced the speaker of the evening, Dr. Silvio von Ruck, who read a thesis on "Local Reactions in the Specific Treatment of Tuberculosis."

Discussion by Drs. Louis C. Boisliniere, Jacob J. Singer, George Ives, Edward P. Buddy and Selig J. Simon; Dr. von Ruck closing.

A letter from the St. Louis Convention and Publicity Bureau offering aid in securing the 1918 meeting of the Southern Medical Association for St. Louis was read and discussed by Drs. Louis C. Boisliniere, R. B. H. Gradwohl, R. Emmet Kane, Francis Reder and Joseph Grindon.

It was moved that the letter be filed. Carried.

On motion the committee appointed at the last meeting to secure the meeting of the Southern Medical Association was discharged with thanks.

Dr. A. F. Koetter reported the results of the nomination for officers for 1918.

Attendance 96.

HILLEL UNTERBERG, M.D., Secretary pro tem.

Meeting of Nov. 17, 1917

The meeting convened at 8:35 p. m., Dr. Albert H. Hamel presiding.

The minutes of November 10 were read and approved.

The scientific program consisted of a paper on "Transformation of the Blood in Certain Pathological States," by Dr. W. H. Clithero.

Col. C. Dercle, Medical Service, French Army, delivered an illustrated lecture on the organization which has been perfected by the French medical officers.

Dr. Louis C. Boisliniere moved the by-laws be suspended and Colonel Dercle be elected to honorary membership. Carried unanimously by a rising vote.

It was moved that the paper of Dr. E. Lee Myers be deferred until November 24 and made a special order of business. Carried.

Dr. Joseph Grindon reported for the committee appointed by the council to select boards advisory to the local examining boards for the coming draft.

He presented a tentative draft of twenty-eight advisory boards, one for each of the twenty-eight wards.

Dr. Grindon was appointed a committee of one to draw up resolutions assuring President Wilson of the fullest cooperation of the society in securing a systematic physical examination of the registrants within the city of St. Louis.

The resignation of Dr. R. Emmet Kane from the council and various committees was read by the secretary. It was moved that action on his resignation be deferred indefinitely.

Attendance 196.

Meeting of Nov. 24, 1917

The meeting convened at 8:50 p. m., Dr. Albert H. Hamel presiding.

The minutes of the previous meeting of November 17 were read and approved.

The scientific program consisted of the following: A paper entitled, "Obstruction of Oesophagus with Report of Cases," by Dr. E. Lee Myers.

Discussion opened by Dr. Francis Reder and continued by Drs. A. R. Kieffer, Howard Carter and Edward H. Kessler; Dr. Myers closing.

Representative Jacob E. Meeker discussed the Owen Amendment and other phases of the work being done by congressional committees in furthering the country's cause.

It was moved that a vote of thanks be extended Congressman Meeker for his excellent address. Carried.

Dr. Frederick Baldwin, chairman of the Health and Public Instruction Committee, presented the following resolutions:

WHEREAS, There will be introduced into Congress an amendment to "Act for the Further and More Effectual Provisions for the National Defense, etc.," and

WHEREAS, This amendment provides for filling vacancies in the Medical Corps, U. S. A., by officers of the Medical Officers Reserve Corps, and

WHEREAS, This amendment provides that such officers shall be entitled to all the rights and privileges of officers of like rank in the Army of the United States, therefore be it

Resolved, That the St. Louis Medical Society heartily endorses this amendment and that a copy of this resolution be sent to all Missouri representatives and senators and that a copy be sent to the President of the United States.

On motion the resolution was adopted.

Dr. Gayler reported the Election Committee had decided to close the election at noon, Sunday, November 25. Dr. Koetter explained his reasons for the decision.

The secretary explained his reasons for inserting notice in Bulletin closing the polls at noon, Monday, November 26.

Dr. R. Emmet Kane moved the by-laws be suspended and the election be closed Monday noon, November 26, instead of Sunday, November 25.

The chair announced that it would require a unanimous vote of the members to set aside the by-laws.

A division being called for on the vote, three members voted in the negative and the chair declared the motion lost.

The chair announced the council had been summoned to meet Sunday noon.

Dr. Kane then moved the council be ordered to meet Monday, noon, to count the ballots. Seconded by Dr. Rudolph Buhman.

The chair ruled the motion out of order.

Dr. Kane appealed from the decision of the chair. The chair was not sustained.

Dr. Kane's motion was then put and carried unanimously.

Dr. Norvelle Wallace Sharpe moved the by-laws be suspended and all ballots received before noon, Monday, November 26, be counted. Carried unanimously.

A letter from the St. Louis Convention and Publicity Bureau asking that the society extend an invitation to the American Public Health Association to hold its 1918 meeting in St. Louis was read.

It was moved that the society assist in securing the 1918 meeting of the American Public Health Association for St. Louis. Carried.

Attendance 212.

J. ALBERT SEABOLD, M.D., Secretary.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Forty-Fourth Meeting, Monday, October 8, 1917

1. EXHIBITION OF CASES.

A. REPORT OF CASE OF TYPHOID FEVER FOLLOWING RECENT VACCINATION.—By DR. R. K. ANDREWS.

Case reported because of following points:

1. Patient received inoculation February 27, to March 13, 1917; 2, developed typhoid fever Sept. 8, 1917; 3, relapse Sept. 25, 1917; 4, course of disease much modified; 5, activities of patient limited to hospital and home. Patient 22 years old; occupation, nurse; family history, negative; previous history, appendectomy seven years ago, attack of jaundice lasting one month, in 1914; accompanied by severe pain and tenderness in right upper quadrant; positive diagnosis of gallstones not made.

From February 27 to March 13, patient received three injections of typhoid bacilli: usual dosage from University laboratory; reaction following last injection only. Vaccine made from virulent strain of typhoid bacilli. Patient dates beginning of illness to August 28.

About September 3 had morning temperature of 99.8 F., which fact was not known when patient was seen on September 5. At that time temperature 99.5, slow pulse; slight abdominal tenderness, more marked in cecal region; no rose spots; anorexia and constipation had been present a few days.

With these symptoms patient felt well during forenoons and was not heard from again until September 8, when she entered hospital with following symptoms: Temperature, 103; pulse, 85; throbbing occipital headache; abdominal tenderness, constipation, weakness, anorexia with slight nausea.

Examination showed patient looking very well. Face slightly flushed; pain in occiput; no neck rigidity or Kernig; reflexes normal, tongue broad clean, moist; lungs clear, heart negative, abdomen slightly distended, ileocecal tenderness; spleen not palpable, liver, finger's breadth above costal margin; no rose spots. Borborygmi all over abdomen; no nausea or vomiting. Pulse not dicrotic, rate 85, full regular; blood pressure, systolic 185, diastolic 85.

Laboratory findings: red blood cells, 4,500,000; white blood cells, 5,200. Hemoglobin, 90 per cent.; lymphocytes, 27 per cent.; large mononuclears, 10 per cent.; polymorphonuclears, 61 per cent.; urine examination for sugar, albumin, casts, blood indican, acetone, all negative. Specific gravity 1.020, acid. Blood culture on September 9 and 10 were positive. Widal negative.

Most marked symptoms from September 8 to September 17 were throbbing occipital headaches, abdom-

inal tenderness, especially ileocecal; bladder retention, necessitating catheterization for five days; at no time was spleen palpable, rose spots visible or pulse dicrotic. Patient did not show toxic symptoms of typhoid infections. From September 17 to 24, all symptoms excepting vague abdominal tenderness had subsided.

On September 25 there was sudden rise in temperature; marked rigidity over entire abdomen; muscle spasm; moderate distention; white blood cells, 4,600; pulse, 90; blood pressure, 110 systolic, 80 diastolic. Blood culture positive on September 25 and 26; Widal negative.

Most marked condition during relapse was extreme tenderness over right abdomen, especially posteriorly over eleventh and twelfth ribs; occipital headaches and bladder retention returned but in milder form. Patient more toxic than on first attack; temperature continued high for six days, reaching normal in about ten days. During relapse pulse was ten to fifteen beats per minute faster than on first illness, heart showing quite marked irritability, which was not noted on admission.

Organisms from blood cultures were differentiated on sugar media; repeated cultures from urine were negative; two cultures from stools negative; Widal's were all negative (about ten) excepting one taken just before relapse which was positive in dilution of 1:60 macroscopically.

DISCUSSION

DR. GILLILAND: This case suggested to me looking up the occurrence of typhoid in those who had been vaccinated and I found a report on about 2,000 cases of typhoid in the European armies, with about 250 of these cases occurring in individuals who had been vaccinated. That represents about one in ten and looks like rather a high percentage, but one has to consider the great number of those men who have been vaccinated.

The best statistics available on typhoid vaccination are those compiled by Major Russell of the U. S. Army, on over 200,000 men of the Army and Navy who have been vaccinated against typhoid; there occurred only twenty-seven cases of typhoid with only one death and in practically all of these twenty-seven cases the disease has been mild.

There have been a few observers who have reported that typhoid vaccination has not been very successful. I noticed one observer who said that the death rate before vaccination was 7 per cent. and is now 6.3 per cent. Of course, a death rate of 7 per cent. in typhoid in any large number of cases is certainly very low and a death rate of 6.3 per cent. is certainly below the average. One is apt to think that typhoid vaccination is not very much of a success when one finds so large a number of the individuals vaccinated developing typhoid. However, Major Russell's report is, I think, an answer to any criticism along that line.

I was interested, too, in the symptoms presented by typhoid in those who have been vaccinated. I find it mentioned that rose spots, in any large display at least, and abdominal tenderness were very frequently absent.

B. A CASE OF APHASIA.—By DR. K. W. BROWN.

The patient is 48 years of age, married, of German nationality, and a blacksmith by trade. Family history unimportant. Past history includes chronic alcoholism and also the fact that patient suffered an injury to right eye several years ago, by having a piece of steel fly into it. Since that time his sight has been somewhat impaired in his right eye.

Present illness dates from one year ago when he began to feel weak and indisposed to work. According to his story he lost senses of smell and taste, which, after being absent about two weeks, gradually returned. In March, 1917, he was brought home by

some friends from his blacksmith shop. He was in a dazed condition but not unconscious. He lay down for a half hour, then arose, went back to his shop, locked up, came back to the house and went to bed. Remained in bed three weeks. At this time had great difficulty in using right limbs and in speaking. After being in bed three weeks, during which time he gradually improved, he got up and was able to do a little work again but did not regain his former strength. It was noticed also that he had lost his ability to read and to recognize colors. On Sept. 30, 1917, he talked nonsensically at breakfast table, and his right hand trembled violently. Then his body grew rigid, his head and eyes turned to the right and he was unconscious for several minutes but was soon walking about again. On Oct. 2, 1917, he was admitted to Barnes Hospital complaining of loss of memory, weakness of right limbs, inability to read and defective vision in right eye.

On examination he was found to have moderate thickening of arteries with a blood pressure of 165/85. There was distinct weakness of right arm and leg. The right hand registered 26 kilos, the left 37 kilos, on the dynamometer. He had a complete right-sided homonymous hemianopia. He was unable to read, or to recognize colors or objects. If allowed to touch objects he could generally identify them when unable to do so by sight. There was marked impairment of memory; he was unable to give the names of his children or to give a correct account of his disease. He did not know where he was. Naturally he was difficult to refract, but his vision was approximately 10/250 in right eye and 20/30 in left eye.

Wassermann negative in blood and spinal fluid. The urine showed a trace of albumin and a few hyaline and granular casts.

After a week he showed considerable improvement. The weakness of the right side was almost completely gone and he showed great improvement in recognizing objects and colors. The inability to read persisted. Before illness he could read and write both English and German.

DISCUSSION

DR. E. SACHS: This man has a very unusual type of aphasia. There are two very interesting features about the case, which did not come out very strikingly at this time, though Dr. Brown spoke of them. The first is that the man had, to start with, a disturbance of smell; but he did not have, at any time, a disturbance in hearing, I believe, Dr. Brown?

DR. BROWN: He has a disturbance in hearing. Hearing is not alike on both sides. It is looked on by Dr. Shapleigh as a chronic otitis media.

DR. SACHS: The marked features are the very evident visual disturbance, some speech disturbance, and the history of taste disturbance. The particularly interesting points seem to me to be the type of lesion, the pathology of it, and the location of it. It comes very near to being one of those rare lesions in the so-called "Wernicke's field." If you look at the brain from the side (illustrating by diagram) you will see that the fibers from the occipital lobe come forward in this direction and run toward the internal capsule. Then if you look at the brain in cross section, those same fibers come forward in this region—this is meant to represent the internal capsule and here is the thalamus—at about this point, and it is the same point through which fibers from the temporal lobe down here come up and join with the visual fibers. It is also the region in which the sensory speech fibers come in from the side and they too run through this way. There is just one place where they all come together, which is known as "Wernicke's field."

Very occasionally you see a lesion in which those three sets of fibers are all involved. This man has his visual fibers completely gone, with a homonymous hemianopsia; he has some evidence of taste fibers

being involved; and he has perhaps, an auditory aphasia, in that he does not always understand what is said to him.

Now as to the pathology of this lesion: The history, of course, is quite typical of a vascular lesion. I asked Dr. Brown to bring this old article over, which was published in 1909 and, unfortunately, does not get the prominence that it deserves. It was written by the late Dr. Beevor, who took human brains, dissected them out of the skull very carefully, and then connected all the branches of the circle of Willis with injection bottles and put different colored solutions into each bottle. He then ran the different colors in at the same time, in order to get the distribution of the various branches of the circle of Willis, and he got perfectly extraordinary results. The plates which illustrate his article show very definitely the areas supplied exclusively by certain branches of the circle of Willis. Here is a section showing the occipital region, the posterior cerebral artery supplying the region of the cuneus, the posterior part of the pulvinar, and the posterior part of the internal capsule, about up to the point where the sensory fibers go through the internal capsule.

Here is a frontal section, which shows the same thing very well. It shows that region of the internal capsule and, in this case, the thalamus also and the temporal lobe, this part down here, all supplied by the same blood vessels, by the posterior cerebral artery.

From the fact that some of this man's symptoms have apparently cleared up, I should think the pathology was pretty evident and that we are dealing with a thrombosis of the posterior cerebral artery which involved that region, the "Wernicke's field" quite definitely.

Those of you who do not know this article by Beevor ought to get acquainted with it. It came out in the "Philosophical Transactions."

2. A CASE OF HEMORRHAGIC SEPTICEMIA DUE TO COLON BACILLUS IN A YOUNG INFANT.—By HANS ANDERSEN.

Very few instances of this condition are on record; five cases were described by Kamen in 1893.

The present case is that of a child brought to the St. Louis Children's Hospital, Sept. 3, 1917, when it was four days old. It died Sept. 7, 1917.

It was born at full term, spontaneously, after easy labor. Weight at birth 9½ pounds. Nursed first time twenty hours after birth. One half hour later cried with colic; bowels moved with greenish stool. Following days: crying, cramps, and twelve to fifteen stools a day, greenish and watery; vomiting, intense inflammation and irritation about anus.

Admitted to hospital. Was given half breast milk; continued vomiting; five to six stools a day, greenish with mucus, later black. Vomitus was dark brown. Child became emaciated. It lost 1 pound in four days. Was cyanotic over head and chest with a pustulous eruption on neck and upper chest. Temperature continuously high: 101 to 104 F. Patient died in convulsions on fourth day after admission, eight days after birth.

Necropsy Findings: Cyanosis of head, neck and chest with pustulous eruption. Petechial hemorrhages under nails of fingers and toes; desiccating umbilical cord. There is no inflammation around umbilicus and no free fluid in the body cavities.

The heart is markedly contracted and there is marked congestion of all organs and petechial hemorrhages into the pleura and intercostal muscles.

Lungs partly filled with air with many irregular, small and large, deeply red patches which are non-crepitant, moderately firm and not depressed. On section these areas bleed freely. The liver is yellowish mottled. The intestines are markedly con-

tracted. Six agonal intussusceptions are found in the small intestine. No other changes except the marked congestion. There is hemorrhage into the medulla of the adrenal. The kidneys are much congested with uric acid infarcts in the papilla. The bladder is strongly contracted.

Microscopic examination of the organs shows an extreme congestion of all organs with hemorrhages into the mucosa and submucosa of the intestines, hemorrhage into the spleen and the medulla of the adrenals, petechial hemorrhages into the cortex of the adrenals and fatty degeneration of the liver. In the lungs are multiple hemorrhages arranged in patches similar to a bronchopneumonia but without any inflammatory reaction in the alveoli. The alveolar tissue has not undergone necrosis. Pure cultures of colon bacillus were obtained from the heart's blood and the lungs.

DISCUSSION

DR. G. CANBY ROBINSON: The hemorrhagic character of the lungs in this case is worthy of emphasis. The colon-typhoid group seems to affect the lungs characteristically. I once had the opportunity of studying a case of pneumonia, lobar in type, from which was isolated a pure culture of B-paratyphoid bacillus and the lesion was strikingly hemorrhagic. In reviewing the literature of typhoid-lung complications, I found that in those cases where pure cultures of the typhoid bacillus had been recovered from the lungs, it was almost universally described as a hemorrhagic type of pneumonia, and this characteristic seems typical of pneumonia caused by the colon-typhoid group of organisms.

DR. BARNEY BROOKS: One thing that was interesting to me about this case was the similarity of the lesions, which Mr. Andersen described as occurring in this particular case, with the lesions that follow injection of the toxins of intestinal stasis into the circulation of dogs; that is, the hemorrhages throughout the body, especially found in the intestinal tract, with congestion of the spleen and hemorrhage into the lungs. Those lesions are exactly what we found following injection of intestinal stasis contents into the circulation. Injection of the colon bacillus into the circulation of animals is not sufficient to produce those lesions. It must be the toxins which accumulate with the growth of the organisms in the intestinal tract.

DR. M. T. BURROWS: We were very much interested in this case, not only on account of the pathological lesions which it presented but also from the fact that it was a colon infection and we felt quite sure it was the same thing as has been described in Europe as occurring epidemically from the colon bacillus.

We hoped that tonight we would know something about the epidemiology of the case, but we were unable to find the people and get the full data. However, I thought the case was well worth reporting from the standpoint, alone, of the possible danger of using infected water with newborn children.

AN EXPERIMENTAL STUDY OF SURGICAL SHOCK.—By Drs. JOSEPH ERLANGER, ROBERT GESELL, HERBERT S. GASSER, AND B. LANDIS ELLIOTT.

"Shock" is arbitrarily defined as a reduction of the arterial pressure to or below 50 millimeters of mercury, together with the other usual signs of that condition. It has been produced in the dog by (1) exposure and manipulation of the abdominal viscera; by (2) a two-hour partial occlusion of the inferior vena cava; by (3) partial occlusion of the thoracic aorta lasting two hours; by (4) twenty minute intravenous injections of 1:1000 adrenalin; and by (5) injection into the liver, via the splanchnic vein, of a suspension of lycopodium spores.

Arterial pressure, venous pressure, jugular and portal, and vasomotor tone have been followed. The activity of the vasomotor center is markedly reduced, though not lost, in shock brought on by intestinal exposure, by caval occlusion, and by the trapping of blood in the splanchnic area that results from plugging the portal radicals; whereas in aortic shock, and possibly also in adrenalin shock vasomotor tone may be but little reduced. Reduced vasomotor tone may therefore be regarded as a secondary rather than as a primary cause of "shock." Temporary partial occlusion of the vena cava and complete occlusion of the portal radicals start the animal toward shock, presumably by damming back blood in the veins, and so reducing the blood supply to the parts both directly and indirectly involved. Aortic occlusion and massive doses of adrenalin also interfere with the blood supply in the parts directly affected, but improve the blood supply elsewhere. At the time shock develops, excepting possibly adrenalin shock, neither the venous pressure nor inspection indicate any engorgement of the mesenteric veins and capillaries. In exposure of the intestines, however, when the intestines are permitted to hang out of the abdominal incision, local congestion seems to be present. Under these circumstances there exudes from the serous surface of the intestines a considerable quantity of bloodstained fluid. Venous engorgement, brought on by high venous pressure, is therefore not necessarily a factor in shock production. Neither is the heart necessarily affected. The only constant factor seems to be extensive tissue damage. In the case of exposure of the abdominal viscera the damage is directly inflicted; transudation of plasma and congestion are obvious. In aortic, caval, adrenalin, and portal shock, the temporarily reduced circulation, local and general, induces the tissue damage that eventually leads to shock, presumably through the same processes that bring on intestinal shock. The records of every experiment we have made give indirect evidence of a reduction in effective blood volume in shock.

DISCUSSION

DR. BROOKS: One thing I would like to know is, if shock is to be attributed to cutting off the blood supply from a portion of the body for a certain length of time, how is it that in certain operations on the extremities the blood supply is often completely cut off for some considerable time, by a tourniquet and this does not particularly affect the patient's general condition?

BENTON COUNTY MEDICAL SOCIETY

The regular meeting of the Benton County Medical Society was held in Warsaw in Dr. Savage's office, December 19. The train from the north being late, the meeting was called to order at 10:30 with Dr. Savage acting as president, pro tem. The minutes of the last meeting were read and approved and reading of letters followed with resolutions to accept unanimously the resolutions of the State Association relative to the practice of those who have gone to the front.

The applications of Drs. C. E. Snively, J. M. Edwards, and J. A. Murray were read and accepted for membership. Dr. Murray is from Hickory County but as they have no medical society, he came to Benton for membership and we were glad to receive him.

The next in order was the election of officers for the ensuing year which resulted as follows: president, Dr. Willis G. Jones of Lincoln; vice president, Dr. Edmund F. Haynes of Warsaw; secretary-treasurer, Dr. Horace G. Savage of Warsaw; delegate,

Dr. J. M. Edwards of Fairfield; alternate, Dr. Horace G. Savage; censor for three years, Dr. J. P. Van Allen of Cole Camp; censor for two years, Dr. E. F. Haynes.

After the election of officers, a motion was made to pay the Society dues of both Drs. J. A. Logan and N. A. Schwald, who are in the army service for this county, and unanimously voted on.

As a final ending for the meeting we were treated with a closing address of the outgoing president, Dr. E. L. Rhodes, which was of exceptional interest and characteristic of that fidelity and altruism which he has always shown in behalf of the old Benton County Medical Society.

Those present were Drs. E. L. Rhodes and W. G. Jones of Lincoln; Dr. J. M. Edwards of Fairfield, and Drs. E. F. Haynes, Horace G. Savage, R. L. Pomeroy and J. R. Smith of Warsaw.

J. R. SMITH, M.D., Secretary.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in their rooms Wednesday evening, Dec. 5, 1917, with forty-six members present. The minutes of the previous meeting were read and approved.

A motion was made by Dr. A. L. Gray and seconded by Dr. Owens that the society dispense with the annual banquet. Carried.

A motion made by Dr. Gray that the same committee appointed to arrange for the banquet be authorized to arrange a smoker, and instructed to proceed accordingly, was seconded and carried.

A letter was read by Colonel Joe Corby requesting members of the society to make examinations free for applicants to the Governmental School of Telegraphy, and the president was instructed to appoint a committee of five to assist Colonel Corby in the examination of candidates.

The resignation of Dr. E. F. Higdon, having been favorably acted on by the board of censors, was presented to the society and the resignation accepted.

The committee on Whittington Hospital had no report ready.

The next order of business was the election of officers to serve the year 1918, which resulted as follows: president, Daniel Morton; first vice president, L. J. Dandurant; second vice president, G. R. Stevenson; secretary, W. F. Goetze; treasurer, J. M. Bell; censor for three years, 1918, 1919 and 1920, J. I. Byrne; delegate for two years, 1918 and 1919, J. F. Owens, alternate for two years, 1918 and 1919, F. H. Spencer.

W. F. GOETZE, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The regular meeting of the Cape Girardeau County Medical Society was held at Cape Girardeau, December 10, 1917.

The following officers were elected for 1918: President, D. G. Seibert; vice-president, O. L. Seabaugh, Cape Girardeau; secretary, E. H. G. Wilson, Cape Girardeau; treasurer, W. N. Howard, Cape Girardeau; delegate, G. B. Schulz; censor for three years, D. H. Hope, Cape Girardeau. No alternate was elected as delegate has authority to appoint his substitute if necessary.

There being no further business the society adjourned.

E. H. G. WILSON, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, Thursday, Dec. 13, 1917, in the Rest Room of the courthouse. Dr. Jacob Triplett, acting chairman, called the meeting to order at 2 p. m., with the following members present: R. M. Miller of Belton; R. G. Keller of Freeman; H. A. Brierly of Peculiar; W. F. Chaffin of Raymore, and Drs. J. U. Scott, M. P. Overholser, Jacob Triplett, H. S. Crawford and David S. Long of Harrisonville. The minutes of the last meeting were read by Dr. David S. Long, secretary, and approved.

A business program with a review of the year's meetings was prepared for this session, and all present took an active part in the discussion and much interest and enthusiasm was created. It was decided to make a special effort to enrol every physician in the county as a member of the society.

Dr. William F. Chaffin of Raymore received his commission in the Medical Reserve Corps and is expected to be called into active training by the first of the year. This makes the *fifth* physician to enter the Reserve Corps from Cass County, and we are mighty proud of the record. Lieut. Harry S. Crawford of Camp Funston was present and gave a very interesting talk on the training the physician receives.

Election of officers for the ensuing year resulted as follows: president, R. G. Keller, Freeman; first vice president, Jacob Triplett, Harrisonville; second vice president, R. D. Ramey Garden City; secretary-treasurer, David S. Long, Harrisonville; honorary secretary-treasurer, Lieut. H. S. Crawford, Camp Funston; censor for three years, R. M. Miller, Belton; delegate, H. Jerard, Pleasant Hill; alternate, David S. Long, Harrisonville.

Adjourned to meet in Harrisonville the second Thursday in February, 1918.

DAVID S. LONG, M.D., Secretary.

DUNKLIN COUNTY MEDICAL SOCIETY

The Dunklin County Medical Society met at Kennett, Mo., Nov. 16, 1917, with the following members present: president, E. G. Cope; J. J. Drace, W. G. Hughes, L. J. Matlock, W. L. Gossage, T. J. Rigdon, Paul Baldwin, G. W. Dalton, A. T. Chatham, W. R. Limbaugh and E. F. Harrison, secretary. Visiting physicians were S. E. Mitchell, Malden; J. C. McKay, T. H. Egbert and U. A. V. Presnell, Kennett; G. O. Hammersly, Campbell, and Lieut. W. O. Finney, M. O. R. C., Chaffee.

There were no papers prepared for the meeting, same being called for business.

Dr. A. G. Scott of Cardwell was elected to membership.

Drs. J. C. McKay and G. O. Hammersly made application for membership. A motion was made and carried that their names be referred to the Board of Censors.

Lieut. W. O. Finney of Chaffee talked on Medical Officers Reserve Corps.

The secretary read a communication from the state headquarters urging enlistments in the Medical Reserve Corps.

A motion was made and carried that the secretary write Major W. H. Luedde that the quota for this county was filled, there being forty-three active physicians in the county and the following nine men having passed the examination, seven of them having received their commissions: J. G. Birchett,* Cardwell, captain; A. G. Scott, Cardwell, lieutenant; T. H. Egbert, Kennett, lieutenant; E. F. Harrison, Kennett, lieutenant; U. A. V. Presnell, Kennett, lieutenant; Dr. McAllister, White Oak; G. O. Hammersly, Campbell; John D. Hess,* Clarkton, captain; Homer Beall,* Malden, lieutenant.

* In active service.

A communication from Missouri State Council of Medical Defense asking the formation of an Auxiliary Medical Defense Committee for Dunklin County was read and the society elected the following committee: Drs. W. G. Hughes, Senath; G. W. Dalton, Malden; P. J. Kesling, Campbell, with Dr. E. G. Cope, Hornersville, president, and Dr. E. F. Harrison, Kennett, secretary.

A communication from the state board of health asking the formation of an advisory board to local exemption board was read and discussed, and Drs. Paul Baldwin, S. E. Mitchell and E. G. Cope were elected for same.

A communication from the Surgeon-General asking the society to furnish information concerning persons who have been disabled and compelled to learn new occupations, was read, and Drs. Paul Baldwin, L. J. Matlock and S. E. Mitchell were elected a committee to perform this duty.

Dr. Dalton reported a case of infantile convulsions from an unknown cause. Case was discussed by all present.

E. G. COPE, M.D., President.
E. F. HARRISON, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in regular session in the High School building, Clinton, on Wednesday, Dec. 12, 1917. As a prelude the high school was assembled at 1:20 p. m. and Capt. N. W. Sharpe, M. R. C., of St. Louis, talked on the duties of the young people to help in this great work of the war, to help in conserving food in Red Cross work, and by example in lessening the expenditures for dress and luxuries of all kinds.

At 2 p. m. the Society was called to order by President McNeese. Present were: Drs. A. J. McNeese, J. R. Wallis, S. W. Woltzen, S. A. Poague, R. D. Harie, A. E. Derwent, N. I. Stebbins, B. B. Barr, W. R. Campbell, L. L. Smith, J. W. Galbreath, F. M. Douglass. Visitors, C. A. Smith, Osceola; J. G. McDonald, Ulrich, and W. Steele, Clinton. The minutes of the previous meeting were read and approved.

At Dr. Woltzen's request his paper was postponed to another meeting.

Capt. N. W. Sharpe lectured on the requirements of the Medical Department of the Army for doctors in the care of and attention to the active forces in camp and front. The captain went into a detailed explanation of the necessity of every one to sacrifice something in the effort to make the medical corps more efficient and effective by increasing the force to the maximum required, showing a great number of views of camps, hospitals and members of nurse and hospital corps, also some wounds as first inflicted and after repair had corrected deformity.

At 4 p. m. the election of officers for the ensuing year was called and the following were elected: T. A. Blackmore, Windsor, president; S. W. Woltzen, Clinton, vice president; F. M. Douglass, Clinton, secretary-treasurer; A. J. McNeese, delegate; Will P. Bradley, Nevada, alternate delegate; N. I. Stebbins and R. D. Haire, censors.

F. M. DOUGLASS, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

The regular meeting of the Howard County Medical Society was called to order by the vice president, Dr. Thomas J. Payne, in the office of the secretary at Fayette, December 7, at 2 p. m. Present were Drs. T. J. Payne, C. H. Lee, V. Q. Bonham, J. R. Champion, W. R. Hawkins, W. B. Kitchen and C. W. Watts. Our councilor, Dr. A. R. McComas of Sturgeon, was present by invitation and gave us an excellent talk which did us much good.

The meeting was further devoted to the election of officers for 1918, which resulted as follows: presi-

den, W. R. Hawkins, Glasgow; first vice president, J. R. Champion, Hillsdale; second vice president, Thomas J. Payne, Fayette; secretary and treasurer, C. W. Watts, Fayette; delegate to the annual meeting of the state association for two years, 1918-1919, C. H. Lee, Fayette; alternate, V. Q. Bonham, Fayette; member Board of Censors, W. B. Kitchen, Glasgow.

On motion, adjourned.

C. W. WATTS, M.D., Secretary.

JASPER COUNTY MEDICAL SOCIETY

At the meeting of the Jasper County Medical Society, Joplin, Nov. 20, 1917, the following resolution was introduced and adopted:

WHEREAS, President Wilson has asked the doctors of this country to identify themselves with the Medical Advisory Boards, which are to be constituted in the various districts throughout the United States for the purpose of making a systematic physical examination of all registrants for the United States Army, and

WHEREAS, It is the earnest desire of the members of this association to assist and cooperate with the United States government in the fullest measure, therefore be it

Resolved, That it be the sense of this meeting that the members of this association agree to enter and do this work with a whole heart, in their desire to further all the interests of the United States government in this great war.

JOHN F. MORGAN, M.D.

C. C. CUMMINGS, M.D.

DANIEL R. HILL, M.D.

Committee.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at Aurora, Thursday, Dec. 4, 1917, with the following members present: F. S. Stevenson, T. D. Miller, J. A. Melton, C. A. Moore, R. C. Robertson, R. W. Smart, H. L. Keer, T. T. O'Dell, W. S. Loveland, J. W. Smith, F. R. Spell, C. W. Shelton, W. I. Fulton, S. A. Newman, Joseph W. Love, C. W. Russell and C. E. Fulton.

The following officers were elected for the year 1918: President, T. D. Miller; vice-president, R. W. Smart; secretary, R. C. Robertson; treasurer, F. S. Stevenson; delegate, H. L. Kerr; alternate, W. S. Loveland; censor, C. A. Moore.

The following program was rendered: Physical Examinations of the Men Who Are Called, Dr. H. L. Kerr; Modern Treatment of Wound Infection, Dr. C. W. Russell; Mobilization of the Medical Profession for the War, Capt. Joseph W. Love; Our Financial Condition, Dr. F. S. Stevenson.

The following resolutions were read and adopted:

WHEREAS, The U. S. Government is in war with a foreign country and many of our colleagues, along with the boys in the ranks, will give their services to the Government, be it

Resolved, By the Lawrence-Stone County Medical Society that we extend to them our best wishes and an early return to their families and friends, and be it further

Resolved, That we pledge ourselves to help them regain their practice on their return home, and we further offer our services to the needy dependents of the soldiers free of charge.

Committee:

W. S. LOVELAND,

T. T. O'DELL,

T. D. MILLER.

The society adjourned to meet at Aurora, March, 1918.
R. C. ROBERTSON, M.D. Secretary.

PETTIS COUNTY MEDICAL SOCIETY

The regular annual meeting of the Pettis County Medical Society was convened on Dec. 18, 1917, Sedalia, at 8 p. m., by Vice President A. E. Monroe.

After reading and adoption of the minutes of the previous meeting, Drs. C. B. Trader and D. P. Dyer who had been appointed a committee to send Christmas presents to members of the Society who are in the government military or naval service reported that they had sent packages to each of the following: Drs. F. B. Long, Charles H. Long, C. S. McGinnis, H. D. Harvard and Eugene A. Heibner. Some of these men are now at training camps in this country, some in London and others in France behind the fighting lines. They all enjoy the respect and support of their brethren at home who for one reason or another are unable to serve their country in the capacity of soldiers.

The election of officers for the coming year was then held with the following result: President, Dr. A. E. Monroe; secretary, Dr. W. M. Wheeler; treasurer, Dr. Guy Titsworth; delegate, Dr. J. G. Love; censor for the next three years, Dr. C. B. Trader, reelected.

There being no further business, the Society adjourned to meet the first Monday evening in January, 1918.

We wish, through the columns of THE JOURNAL to extend an invitation, not only to the officers of the State Association but to any of the members, to visit us either individually or as a Society whenever an opportunity presents itself.

W. W. WHEELER, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met at the Commercial Club Rooms, Moberly, November 23, 1917, at 8 p. m., for the purpose of electing officers for the ensuing year. The meeting was called to order by the vice-president, Dr. C. K. Dutton. Members present: Drs. C. B. Clapp, E. R. Hickerson, L. A. Bazan, D. A. Barnhart, C. K. Dutton, G. G. Bragg, S. P. Towles and F. L. McCormick. Visitors present: Drs. S. C. Adams, R. A. Mitchell and Epperly.

On motion the following officers were elected: President, Dr. C. K. Dutton; vice-president, Dr. G. G. Bragg; secretary and treasurer, Dr. F. L. McCormick; censor for three years, Dr. D. A. Barnhart (reelected); censor for two years, Dr. M. R. Noland; censor for one year, Dr. O. K. Megee.

Dr. C. B. Clapp, our delegate to the State Association meeting in 1917, reported a splendid program, well attended and much enthusiasm shown.

Dr. F. L. McCormick was chosen to present a paper on pneumonia, its complications and treatment, at the next meeting.

Members paying dues at and since our last meeting were nine.

No further business being before the Society, a motion carried to adjourn to meet again at the Commercial Club Rooms, Moberly, Wednesday, January 2, 1918, at 8 p. m.

F. L. McCORMICK, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at the office of Drs. Potter and Potter in Lancaster, Dec. 20, 1917, with the following members present: Drs. E. L. Cox of Glenwood; J. H. Keller, B. B. Potter and W. A. Potter of Lancaster; J. B. Bridges of Downing. The meeting was called to order by the president, Dr. B. B. Potter at 2 p. m. The minutes of the last meeting were read and approved.

The secretary-treasurer read the financial statement of the Society for the year 1917, showing a balance

in the treasury of \$5.15, with all members paid for the year 1918.

The weather, roads and business were such that the members on the program were not present. There were no papers read, but a number of subjects and cases were discussed, including the Officers' Reserve Corps.

The election of officers for the coming year resulted as follows: President, Dr. B. B. Potter; vice president, Dr. E. L. Cox; secretary-treasurer, Dr. J. B. Bridges; delegate to the state meeting, Dr. E. L. Cox; alternate, Dr. A. J. Drake.

The next meeting will be held at Lancaster, Thursday, April 18, 1918.

J. B. BRIDGES, M.D., Secretary.

STE. GENEVIEVE COUNTY MEDICAL SOCIETY

The Ste. Genevieve County Medical Society held its annual meeting, Dec. 12, 1917, President R. W. Lanning in the chair.

After disposing of routine business, election of officers for the year 1918 was proceeded with, resulting in the selection of the following: president, G. W. Rutledge; vice president, J. A. Wilkins; secretary-treasurer, R. W. Lanning; delegate, F. E. Hinch.

It was moved, seconded and carried that the society out of its surplus funds pay the dues for 1918 for members who are in the service of the Medical Reserve Corps.

No further business appearing, the society adjourned until the second Wednesday in January, 1918.

G. M. RUTLEDGE, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The meeting was called to order at 8:45 p. m. by Vice President Reynolds. Present were: Drs. Joseph A. Prichard, C. A. P. Dunnivant, R. B. Denny, L. W. Cape, Howard Carter, John H. Sutter, R. D. Moore, William H. Townsend, M. Baker, C. L. Armstrong, S. H. Reynolds, P. M. Brossard, Garnett Jones, F. C. Ewing, Horine Miles, Arthur Conway. The minutes of the previous meeting were read and approved.

Election of officers for the ensuing year being in order, the following were nominated in the order named and in each case the secretary was instructed to cast the unanimous ballot of the Society for election: President, S. H. Reynolds, Maplewood; vice president, Joseph A. Prichard, Overland; secretary-treasurer, A. Conway, Webster Groves; censor, W. H. Townsend, Maplewood.

A motion was carried instructing the secretary to write to the Board of Aldermen of Webster Groves, thanking them for the use of the assembly room in the City Hall as a meeting place for the past year.

A motion was carried that the local dues of members in U. S. Service be suspended and the secretary be instructed to remit the state dues of \$3 for each of them to the state secretary and to notify such members that they will be kept in good standing as long as they remain in the service.

On motion, duly carried, the president appointed the following committee to draft a letter of greeting to these absent members: Drs. Cape, Denny and Dunnivant.

A suggestion was made by Dr. Moore that the secretary report regular meetings to the State Journal.

A motion was made and carried that hereafter the secretary of the Society be exempted from the payment of local dues and that the Society pay his state dues as compensation for his services.

Dr. Carter was requested to give a review of the progress in the study of tuberculosis at the next meeting, to which he acceded.

The Society then took a recess and adjourned to the residence of Dr. C. L. Armstrong, where refreshments were served and a most enjoyable evening spent in social intercourse. After a vote of thanks to Dr. Armstrong, the Society adjourned to its next regular meeting.

A. CONWAY, M.D., Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held their annual meeting Nov. 26, 1917, in Marshfield at the office of the secretary, Dr. J. R. Bruce. The meeting was called to order by the vice president, Dr. Schlicht, and Drs. Trimble, Good, Rabenau, Bailey, Schlicht, Roberts, Highfill and Bruce responded to the roll call. The minutes of our last meeting were read and approved, also the report of the treasurer. The secretary stated the fact that our society would hold second place on the roll of honor among county societies for 1918 in the *State Journal*, as a check for our complete membership was forwarded on Nov. 21, 1917, only to be beaten by Taney County Society by four days.

The election of officers for 1918 resulted as follows: president, Dr. W. F. Schlicht, Niangua; vice president, Dr. M. G. Roberts, Marshfield; secretary-treasurer, Dr. J. R. Bruce, Marshfield (reelected); delegate to state meeting, Dr. W. J. Rabenau; alternate, Dr. M. Highfill; member Board of Censors, three years, Dr. D. A. Williams.

Dr. L. G. Shroat of Montana, a former member, was reinstated and his dues paid in full, there being no society where he resides.

It was voted to hold our next meeting in March at Niangua and that the afternoon session of this and all future meetings be opened to the public. It was voted to have the secretary arrange for a composite group photograph of our members.

The question of Webster County Medical Society furnishing our quota of three doctors for the present needs of the army, was taken up and discussed and we agreed not to be slackers but to furnish same by volunteers. Dr. E. H. Roberts of this society has already joined the colors, Dr. Bruce is awaiting his commission, and Dr. Schlicht will volunteer, making up our present quota. Communications from the State National Defense Committee were read and acted on.

A discussion of cases took place and we adjourned at 5 o'clock to the Webster Hotel for supper.

A meeting to the public opened at the library at 7:45 p. m., but owing to the inclemency of the weather there were not many out to hear the good papers read by the following: "Professional Ethics of Doctor to Laity," by Dr. Rabenau; "Family Physician," by G. S. Dugan; "The Physician and the Community," by Dr. Trimble, read by Dr. Bruce. All these papers were well received and freely discussed.

All present enjoyed the meeting very much and we hope to have many more open meetings in future for the benefit of the public of Webster County.

J. R. BRUCE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

PARAFFIN FOR FILMS (SURGICAL PARAFFIN, PLASTIC PARAFFIN).—Paraffin intended for application to burns, etc., should be more ductile and pliable than the official paraffin, and be liquid at or below 50 C. Thin films should be pliable at or below 28 C. and ductile at or below 31 C. and somewhat adherent to the skin. Paraffin for films is used mainly in the treatment of burns. It is used also to prepare "paraffin covered bandages" and to seal gauze dressings. In the paraffin treatment of burns, the wound is cleaned and dried; a thin coating of liquid petrolatum or melted paraffin for films is applied, and is followed by a thin layer of cotton and another layer of cotton; another layer of melted paraffin is applied, and the whole then bandaged.

STANOLIND SURGICAL WAX.—A brand of paraffin for films melting at 47 C., being pliable at or below 25 C. and ductile at or below 29 C. Standard Oil Company of Indiana, Chicago (*Jour. A. M. A.*, Nov. 3, 1917, p. 1525).

SILVER PROTEIN-SQUIBB.—A compound of silver and gelatin, containing from 19 to 23 per cent. of silver in organic combination. Like other silver protein compounds, it is used in from 1 to 25 per cent. or stronger solutions for prophylaxis and treatment of the sensitive mucous membranes, particularly in gonorrhoea, conjunctivitis and other infections of the urethra and of the eye, ear nose and throat. E. R. Squibb and Sons, New York.

ARSENOBENZOL (DERMATOLOGICAL RESEARCH LABORATORIES).—A brand of arsenphenol-amine hydrochloride. Its actions, uses and dosage are the same as those of salvarsan. It is supplied in ampules containing 0.6 Gm. The General Drug Co., New York City.

ACETYSALICYLIC ACID-MILLIKEN.—A brand of acetylsalicylic acid complying with the standards of New and Nonofficial Remedies. It is sold only in the form of 5 grain capsules and 5 grain tablets. John T. Milliken and Co., St. Louis, Mo.

ACETYSALICYLIC ACID (ASPIRIN), MONSANTO.—A brand of acetylsalicylic acid complying with the standards of New and Nonofficial Remedies. Monsanto Chemical Works, St. Louis, Mo. (*Jour. A. M. A.*, Nov. 17, 1917, p. 1695).

PROPAGANDA FOR REFORM

"PATENT MEDICINES" HERE AND IN CANADA.—The federal law governing the interstate sale of "patent medicines" prohibits false and misleading statements in regard to composition and origin and false and fraudulent therapeutic claims. The Canadian law offers no protection against false, misleading or fraudulent statements that may be made for products of this class. As a result, many claims made for "patent medicines" when sold in Canada are not made when the same preparations are sold in the United States. An examination of Dodd's Kidney Pills, Doan's Kidney Pills, Williams' Pink Pills for Pale People, Paine's Celery Compound, Hall's Catarrh Medicine, Hood's Sarsaparilla, Dr. Chase's Nerve Pills, and Gino Pills as sold here and in Canada leads to the conclusion that the "patent medicine" industry as a whole is founded on falsehood, and that misleading and false claims will be made for such preparations, at least in the majority of cases, just so long as manufacturers are subject to no restraint except their own consciences (*Jour. A. M. A.*, Nov. 10, 1917, p. 1636).

SHOTGUN VACCINES FOR COLDS.—There is no reliable evidence for the value of mixed vaccines in the prevention or treatment of common "colds" and similar affections. The Council on Pharmacy and Chemistry accepted for New and Nonofficial Remedies mixed vaccines only on condition that their useful-

ness has been established by acceptable clinical evidence. So far it has not admitted any of the "influenza" or "catarrhal" mixed vaccines (*Jour. A. M. A.*, Nov. 10, 1917, p. 1642).

IODEOL AND IODAGOL.—Iodeol and Iodagol (formerly called Iodargol) are the products of E. Viel and Company, Rennes, France. They have been widely and extravagantly advertised in the United States as preparations containing colloidal, elementary iodine, and with the claim, that, because of the colloidal state of the iodine, they possessed the virtues but not the drawbacks of free iodine. As the result of chemical examination, pharmacologic, bacteriologic and clinical investigation and a study of the submitted evidence, the Council on Pharmacy and Chemistry declared the products inadmissible to New and Non-official Remedies because they did not contain the amounts of iodine claimed; because the iodine was not in the elementary or free condition but behaved like fatty iodine compounds, and because the therapeutic claims were exaggerated and unwarranted. The American agents, David B. Levy, Inc., announce that the sale of Iodeol and Iodagol has been discontinued (*Jour. A. M. A.*, Nov. 17, 1917, p. 1725).

THE CARREL-DAKIN WOUND TREATMENT.—Arthur Dean Bevan holds that the value of the Carrel-Dakin method of treating infected wounds has not been established. He has been forced to the conclusion that Carrel's work does not meet the requirements of scientific research. Bevan believes that the choice of antiseptics in the treatment of infected wounds is of little moment, and that the use of the Carrel-Dakin fluid, like Koch's lymph, Bier's hyperemia and the vaccine therapy of acute infections, will have a short period of popularity (*Jour. A. M. A.*, Nov. 17, 1917, p. 1727).

SPHAGNUM MOSS, A SURGICAL DRESSING.—In England, sphagnum moss, or peat moss, is being used as a substitute for absorbent cotton. The dried moss is said to absorb twenty-two times its own weight of water, while absorbent cotton will not absorb more than six times its weight. For surgical use the dried moss is packed loosely in muslin bags which are then sterilized by heat or chemicals such as mercuric chloride (*Jour. A. M. A.*, Nov. 24, 1917, p. 1790).

ADULTERATED IMPORTED DRUGS.—The U. S. Department of Agriculture announces action against imports of adulterated drugs. Belladonna root was adulterated with yellow dock; cantharides was adulterated with so-called Chinese blister flies, and cinchona bark offered for entry was deficient in alkaloid. Other drugs were illegally labeled (*Jour. A. M. A.*, Nov. 24, 1917, p. 1792).

BELL-ANS (PA-PAY-ANS, BELL).—Bell-ans, formerly advertised as Pa-pay-ans (Bell) in medical journals, is now advertised in newspapers and in medical journals. Among the extravagant claims made for this preparation is the claim that there is no derangement of the digestive organs on which the proper dose of Bell-ans will not act quickly and pleasantly. Instead, proper treatment must aim to determine the cause and attempt its removal, the choice of drugs depending on the conditions that give rise to indigestion. The treatment of indigestion by a single prescription or combination is wholly irrational. While Bell-ans, under its old and new name, has been alleged to contain papain or to be some preparation of the digestive juice of the fruit of *Carica papaya* with other substances, chemists have failed to find papain or to determine the digestive power of the tablets. Bell-ans is essentially a tablet of sodium bicarbonate and ginger, and has all of the virtues, which are few, and all of the limitations, which are many, of a tablet of sodium bicarbonate and ginger. The Council on Pharmacy and Chemistry examined Bell-ans nearly

eight years ago, and the statements made in that report are as incontrovertible today as they were then (*Jour. A. M. A.*, Nov. 24, 1917, p. 1815).

THE HANDICAP OF PROPRIETORSHIP IN MEDICINE.—Dr. J. J. Mundell protests because his article on the present status of pituitary extract in labor was abstracted in "Therapeutic Notes" in a way which appears to him a gross misrepresentation of his attitude toward the use of pituitary extract. Being a house organ, "Therapeutic Notes" contained only those portions of Mundell's article which may be expected to promote the firm's proprietary pituitary preparation. The references to the dangers and the limitations of pituitary extracts were not abstracted (*Jour. A. M. A.*, Nov. 24, 1917, p. 1818).

SALVARSAN, ETC.—Besides the German salvarsan and neosalvarsan, now practically unobtainable, the Council on Pharmacy and Chemistry has recognized diarsenol, neodiarsenol and arsenobenzol (Dermatologic Research Laboratories). It has under consideration salvarsan made by the Farbwerke-Hoechst Company, New York. Before accepting these preparations, the Council requires evidence to show that the products are manufactured under supervision which may be expected to insure their chemical identity and uniformity, and freedom from toxicity. However, in the past, untoward effects have been reported from German salvarsan and neosalvarsan, particularly with the last shipments of neosalvarsan. Recently untoward effects have been reported from neodiarsenol. It is expected that within a short time all salvarsan, neosalvarsan and the various products identical with these will be tested by the government (*Jour. A. M. A.*, Nov. 24, 1917, p. 1819).

BOOK REVIEWS

HANDBOOK OF PHYSIOLOGY. By W. D. Halliburton, M.D., LL.D., F.R.C.P., F.R.S. Thirteenth edition (being the twenty-sixth edition of Kirkes' Physiology). Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street, 1917. Price, \$3.50 net.

The subject of physiology is the most practical study to which the physician can devote his time and attention. The best textbooks of physiology should be on the book shelves of every physician. Kirkes' Physiology has for many years been a prominent member of this class of works. The work has now gone to the twenty-sixth edition, which speaks well for its popularity and stability. This last edition by Professor Halliburton of Kings College well maintains the previously established standard. It is well illustrated, and is written in such a manner as to excite and hold the reader's interest. It is not a reprint of an old work, but is edited right up to the minute, and is well worthy of commendation.—G. W. R.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M.D., F.A.C.S., Associate in Gynecology, Washington University Medical School, and Associate Gynecologist at the Barnes Hospital; Gynecologist to St. Luke's Hospital, Missouri Baptist Sanitarium and St. Louis Mullanphy Hospital; Fellow of the American Gynecological Society and of the American Association of Obstetricians and Gynecologists. Fourth Edition, Revised and Enlarged. Eight hundred engravings. C. V. Mosby Company, St. Louis, 1917. Price, \$7.50.

Crossen's work is one of the best books on this branch of medicine that it has been my pleasure to read. The arrangement is splendid and the subject is handled in a thorough and comprehensive manner.

Rich in illustrations to accompany the reading matter, one can hardly find a disease or a procedure that is not demonstrated by a picture. The chapters on "Medico-Legal Points in Gynecology" and the "Internal Secretory Glands in Relation to Gynecology" are entirely new as far as I know in a work of this kind. The latter, by Hugo Ehrenfest, M.D., is very interesting. He has practically "boiled down" a volume of information and put it in a chapter.

G. B. N.

WHITE AND MARTIN'S GENITO-URINARY SURGERY AND VENEREAL DISEASES. By Edward Martin, A.M., M.D., F.A.C.S., John Rhea Barton, Professor of Surgery, University of Pennsylvania; Benjamin A. Thomas, A.M., M.D., F.A.C.S., Professor of Genito-Urinary Surgery in the Polyclinic Hospital and College for Graduates in Medicine, and Stirling W. Moorhead, M.D., F.A.C.S., Assistant Surgeon to the Howard Hospital, Philadelphia. Illustrated with 422 engravings and 21 colored plates. Tenth Edition. Philadelphia and London: J. B. Lippincott Company. 1917. Price, \$7.00.

This book has received its present state of excellence by successive editions, the present being the tenth. The book like most treatises on genito-urinary diseases gives most attention to the surgical phases of treatment. An exception to this general treatment is found in a short chapter on bacterins and serum therapy and one on the different kidney function tests.

Among the newer surgical procedures is a chapter on the technic of the fulguration of tumors of the bladder. The section on syphilis comprises about 25 per cent. of the space and is probably the best part of the work. It includes a description of the method demonstrating the spirochaeta pallida by means of the dark field illuminator and also a detailed description of the laboratory technic of the Wassermann and allied reaction.

There is no special chapter on urogenital tuberculosis but the subject is discussed in different parts of the book under the separate anatomical heads; this precludes a comprehensive consideration of the general principles of etiology and pathology. On the whole, however, it is a very complete and up-to-date work, well adapted to medical students and men in general practice and is not without interest to genito-urinary surgeons.

C. C.

DISEASES OF THE SKIN. By Richard L. Sutton, M.D., with 833 illustrations and 8 colored plates. Second Edition, Revised and Enlarged. pp. 1021. St. Louis: C. V. Mosby Company. 1917.

The American school of dermatology has been wonderfully prolific of textbooks, among which a number attain a high degree of excellence while two or three have equalled or surpassed any European publications of the same periods. In view of this well established fact the production at this late day of a book which, aside from the pages devoted to the few newly described dermatoses, could awaken the interest of the blasé specialist seemed, to say the least, a hazardous undertaking.

This feat, however, Dr. Sutton has accomplished in the handsome volume before us. Particularly to be recommended is the scheme of "Distribution and Type of Eruption" under the head of General Diagnosis. The pathology as a whole is very good, although the author has perhaps expanded some of his favorite subjects at the expense of others. The newer subjects all find a place. We instance almost at random, gonorrhoeal keratosis, the fourth venereal disease, paraffinoma, and molluscum fibrosum gravidarum. The roentgen-ray treatment of ringworm is clearly presented. In the treatment of syphilis, a noteworthy point is the author's marked preference for the intra-

muscular over the intravenous route in the administration of arsenobenzol (it is high time to stop calling it salvarsan). The comparative serological findings published by the Surgeon-General's office amply sustain this view, but patients will continue to prefer the intravenous method.

To the average man, perhaps, the most attractive feature of the book will be its illustrations, which are both numerous and excellent. Some of the rarer conditions on the human skin, such as thrush, or foot-and-mouth disease, and certain little-known but not easily forgotten tropical diseases, are here pictured for the first time in any book, while such familiar affections as syphilis and eczema are shown by many faithful and truly helpful representations.

Missouri and especially St. Louis have reason to take pride in the mechanical execution of the work, which is equal to anything put out by the older established publishers of Philadelphia or New York.

J. G.

CLINICAL TUBERCULOSIS. By Francis Marion Pottenger, A.M., M.D., LL.D. With a chapter on Laboratory Methods by Joseph Elbert Pottenger, A.B., M.D. With ten text illustrations and charts and six plates in colors. In two volumes. St. Louis. C. V. Mosby Co., 1917.

Volume 1 treats of the pathologic anatomy, pathologic physiology, diagnosis and prognosis.

Volume 2, complications and treatments.

These two volumes, approximately 700 pages each, cover the subject of tuberculosis rather exhaustively. The author instills into his work a great many of his original ideas and quotes freely a great many authorities on various phases of the tuberculosis question. He lays a great deal of stress on the relationship of the nervous system to the symptoms. He states: "While my discussion of this subject is necessarily more or less unsatisfactory because of the many gaps in our knowledge yet I have endeavored to make my treatment sufficiently complete to give those who have not had their attention directed to the importance of visceral neurology, a working basis for further study in this field of investigation."

The study of phthisiogenesis is discussed from the standpoint that tuberculous infection takes place in childhood and that adult tuberculosis is merely a metastasis due to lowered resistance on the part of the body.

The chapters on diagnosis take up the subject thoroughly. The descriptions of physical signs are very plain, but presuppose on the part of the reader considerable knowledge of the physics of sound waves. However, very careful reading of the chapters on physical examination will bring to the reader a great many new ideas and altogether be worth the effort. Tuberculin does not receive a great deal of attention. This is what one would expect in a book on tuberculosis published at the present time.

The chapter on roentgen ray is quite good but rather short. A little more detail into the physics of the roentgen ray would be of value. The author says the roentgen ray has taught us the frequency of hylus infection.

Case histories show the clinical history, the symptoms being divided into three groups: (1) toxic group; (2) reflex group; (3) tuberculous process. A short description of the physical examination follows the result of tuberculin test followed by diagnosis. The description of roentgen-ray plates is also rather short, but sufficient to show how carefully each patient must be examined and all other procedures followed before a positive diagnosis can be made.

On the whole these two volumes are an important and valuable contribution to the tuberculosis problem.

J. J. S.

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ORIGINAL ARTICLES

CONGENITAL CONSTRICTIONS OF THE GASTRO-INTESTINAL TRACT*

OSCAR F. BRADFORD, M.D.
COLUMBIA, MO.

Great interest has been shown in the congenital malformation of the intestinal tract and as a result the incidence, symptomatology, diagnosis and treatment of the various conditions have been rather fully discussed. It is the purpose of this paper to describe cases which illustrate the pathology of congenital gastro-intestinal obstruction and to discuss their relation to the symptomatology of the condition.

MALFORMATION OF THE ESOPHAGUS

The congenital malformations of the esophagus have long been observed. Durston¹ reports a case occurring in the year of 1670. Cases have been added until Kreuter,² reviewing the literature in 1905, found 111 instances of the condition. The most common forms of defects are atresia and stenosis. Atresia occurs in ninety-eight instances in his collection. In cases of atresia communication with the respiratory tract is commonly found, 75 per cent. of his cases having such communication. The site of the communication is usually in the trachea. A few instances are recorded as having communication with the right bronchus, while a somewhat greater number have the lumen of the upper end of the lower part of the esophagus opening into the right bronchus. In such cases of atresia the upper part of the esophagus ends in a blind pouch which is somewhat distended. The lower part of the esophagus is of normal size and in most instances enters the stomach

in a normal manner. In cases which have no continuity between the air passages and the esophagus, the lower end of the esophagus ends above in a blind pouch. Some of the atresias are single, transverse membranous occlusions, with a dilated upper portion of the esophagus and a normal or atrophic lower portion. These occlusions occur at various levels in the esophagus. Atresias having tracheal communication occur at a level above that of the bifurcation of the trachea.

Other cases with similar findings have been added to the literature since Kreuter published his article. Among these are the cases of Eddington,³ Steinert,⁴ Dekester,⁵ Brenneman,⁶ Richter⁷ and Rashb.⁸

The etiology of the condition is unsettled. Defects in development of arteries supplying the part, mechanical injury to mother or fetus during pregnancy, and teratomatous defects have all been given as causative factors. Kreuter² believes the condition due to arrested development at a certain stage in embryonal life. In studying the development of the intestinal tract in human embryos and in embryos of lower animals, he found that in the period from the fourth to tenth week, atresias occur in the fore middle and hind gut of normal embryos. These occlusions occur by proliferation of the endoderm, the lumen becoming filled with cells which mass themselves together. Immediately following this process he finds a vacuolization occurring within the mass. These spaces enlarge and become confluent. The endodermal cells adjacent to these spaces arrange themselves into a tubular canal which becomes continuous with the lumen of the rest of the gut. A failure to properly vacuolate leaves the canal blocked. This may be early in the process leaving complete obstruction, or it may occur later when the

* From the Pathological Laboratory of Washington University Medical School.

* Read before the Central States Pediatric Society, St. Louis, Oct. 18, 1916.

1. Durston: Collection academ. part. étrangère T II, p. 288.

2. Die Angeborenen Verschlüssungen und Verengerungen des Darmkanals im Lichte der Entwicklungsgeschichte, Deutsch. Ztschr. f. Chirurgie, 1905, lxxix, 1.

3. Congenital Occlusions of the Oesophagus and Lesser Bowel, Glasgow Med. Jour., 1913, lxxx, 16.

4. Congenital Atresia of the Oesophagus-Gastrostomy, Prog. med. Wchnschr., 1913, xxxviii, 32, 447.

5. Dekester: Jour. d. sc. med. de Lille, 1913, xxxvi, No. 51.

6. Brenneman: Am. Jour. Dis. Child., 1913, v, 143.

7. Richter: Surgery, Gynecology and Obstetrics, 1913, xvii, 397.

8. Rashb: Russk. Vrach., 1914, xiii, No. 29.

new canal has become continuous but has only a small connecting opening. In these cases stenoses result. The occlusion may be a membrane composed of two layers of esophageal intestinal epithelium, which is continuous with that of the lumen of the esophagus or the intestine on either side, separated by a very thin layer of connective tissue. In other cases the occlusion may be a centimeter in length. In still others the masses of cells have degenerated and fibrous strands remain in the place the esophagus or the intestine would have normally occupied.

From the location of the majority of esophageal atresias, it is very probable that the process occurs about the time the trachea buds off.

The following is an account of a case of atresia of the esophagus with bronchial communication:

CASE 1.—This case is reported through the courtesy of Dr. Fredenthal, who presented the specimen to the laboratory together with the following clinical history and necropsy report:

The child was apparently normal at birth. After nursing, however, the child turned blue, became cyanotic and vomited a few minutes later. This occurred after all subsequent feedings. There was no ballooning of the stomach. Catheters were passed and after some difficulty a No. 15 (French) catheter was thought to have entered the stomach. Water was poured into the catheter but returned immediately having a dirty appearance and containing mucus. The temperature was subnormal in the mornings and went as high as 103 F. in the afternoons. On the third or fourth day a mass was found in the second intercostal space just to the left of the sternum. The skin over the swelling was red in color and the mass fluctuated. The mass was incised at operation and a thick, yellowish white fluid escaped. Cultures and smears showed staphylococci in the fluid. A drain was inserted and the wound left open. The general condition of the child grew worse. Emaciation became more marked. On the seventh day predigested milk was given per rectum. This was continued. It is interesting to note that on the ninth day the stools were yellow in color. The child became more emaciated and died on the thirteenth day of life.

At necropsy the point of drainage from the left intercostal space was said to communicate through a sinus with what was regarded as a large, infected, teratomatous cyst filling the entire mediastinum. The larynx, trachea, large bronchi, lower portion of the esophagus and stomach were brought to this laboratory. No abnormality was found in the other organs.

The specimen shows the esophagus ending blindly above in a pouch 1 cm. in length. On passing a probe up from the stomach, which is normal, through the esophagus the probe enters the left bronchus through an opening 2 mm. in diameter at a point just beyond the bifurcation of the trachea. The esophagus below this point is apparently normal. Passing along in the posterior wall of the trachea is a fibrous strand 3 mm. in width which continues up to the pharynx. This does not become continuous with the blind end of the esophagus above.

The symptoms of esophageal atresia are rather typical. The child often refuses food. After fluid is swallowed it is regurgitated in a very few minutes. Cyanosis occurs on taking

food and with attacks of vomiting. On account of the communication with the air passages, there is often ballooning of the stomach due to "air swallowing." This gives the abdomen a distended appearance and a tympanitic note on percussion. Constipation is constant after a few days. Starvation stools and meconium are passed during the first few days. Progressive emaciation is constant. About the third to fifth day there is a rise in temperature. This varies in degree going as high as 104 F. These patients usually die of starvation within the first week. Terminal pneumonia or fatal aspiration pneumonia may also occur.

Diagnosis of the condition is made by passing sounds, by roentgen ray and by the symptoms given above.

The case described above is interesting from a clinical standpoint because it had definite, yellow, milk stools. There is no reason to believe that any food was taken by mouth. The only feeding, presumably, was that of dextrose and predigested milk per rectum.

STENOSIS OF THE STOMACH

The majority of cases of stenosis of the stomach are those having the stenosis at or near the pylorus. The "hour glass" type stenosis is not rare, however. It may be caused by a constricting band resulting from a fetal peritonitis or there may be a definite hypertrophy of the muscle wall causing constriction.

The following case represents an instance of the last type:

CASE 2.—The child, a premature, breast fed infant, was brought to the St. Louis Children's Hospital with the complaint of "vomiting, blood in the urine, and wasting away." In the hospital the child was found to be very emaciated. Visible peristalsis was present in the epigastrium. No other physical changes were noticed. The stools were green in color and averaged 2 or 3 in number per day.

At necropsy the body is emaciated. On opening the abdomen no adhesions or evidence of fetal peritonitis are found. The stomach and ileum are filled with gas. On opening the thorax bronchopneumonia is found.

On closer examination of the stomach a small constricting band is found encircling the organ at a point midway between the cardia and pylorus. This divides the stomach into two pouches giving it an "hour glass" appearance.

The stomach measures 11 cm. in length. The upper pouch measures 6 cm. in circumference while the lower one measures 3.6 cm. in circumference.

At the point of constriction the stomach is 2.5 cm. in circumference. There is a muscular thickening of the wall at this point. The wall of the upper pouch measures 1.5 mm. in thickness; that of the lower pouch, 2 mm. in thickness, while the thickness at the constriction is 2.8 mm. Microscopical sections show a considerable thickening of the inner muscular coat at the point of constriction. The mucosa of both stomach and duodenum are congested. No other abnormalities are found.

CONGENITAL HYPERTROPHIC STENOSIS
OF THE PYLORUS

Stenosis of the pylorus is frequently found among congenital malformations. This condition has been long recognized. Cautley and Dent⁹ cite a case reported as early as 1841. Dr. Osler¹⁰ cites a case reported by Dr. Hezakiah Beardsley in 1788. The report of the case "appears in the earliest volume of medical transactions issued in this country, entitled 'Cases and Observations by the Medical Society of New Haven County in the State of Connecticut, New Haven, J. Meigs, 1788.'" This article gives a masterly description of a case of congenital hypertrophic stenosis which came to necropsy in the fifth year of life. In 1908 Ibrahim¹¹ reviewed the literature and collected 389 cases. Since that time numerous other cases have been reported.

In recent years Southerland,¹² Burghard,¹³ Rogers and Howland,¹⁴ Downes,¹⁵ Evans,¹⁶ Walton,¹⁷ Scudder,¹⁸ Straus,¹⁹ Sturgis,²⁰ and others have discussed the medical and surgical treatment of cases of pyloric stenosis.

The etiology of the condition is vague. Very interesting theories have been put forth. Thompson²¹ believes that this condition is due to disturbed intra-uterine coordination, causing an overwork in some particular part of the intestinal tract. Some believe the condition due to over-stimulus from some chemical changes in the amniotic fluid. Still others believe the condition results as hypertrophy due to overwork. Mya²² cites a case of "hour glass" stenosis resulting from a fetal peritonitis. Likewise pyloric stenoses with thickening of the wall of the pylorus have been found where constricting bands were near the pylorus. Kreuter believes there is in most instances a primary developmental defect which causes a partial stenosis with a resulting hypertrophy from the added work. Along with the idea of work hypertrophy many believe hypertrophic stenosis a result of continued muscle spasm from nervous disturbance. The nervous mechanism, while fairly well known today, would not explain the occurrence of such spasms. Openchowski²³ states that the centers of constriction for the

pylorus lie in the corpora quadrigemina and the fibers are carried chiefly by the vagus nerve; the centers of relaxation are also in the corpora quadrigemina and the fibers pass along the splanchnics for the most part. Spasm of the pylorus can be made by stimulating the vagus nerve. It is of interest to note that weak solutions of atropin given by mouth in cases of pyloric stenosis often control the symptoms and the patient after a time is apparently normal. On the other hand if the vagi and splanchnics be cut the movements proceed in a fairly normal manner.²⁴ These observations tend to show that extrinsic nerves regulate stomach movement and do not originate it.

Hyperacidity in the stomach and duodenum apparently have some relation to movements of the stomach through stimulation of the intrinsic nervous mechanism and there is alleviation of symptoms in a certain percentage of mild cases by the administration of sodium bicarbonate and sodium citrate.

Sex apparently plays some rôle in the incidence of pyloric stenosis. In Ibrahim's cases, 80 per cent. were males. In the few instances in which we have seen the condition here, 85 per cent. have been males.

Heredity apparently has no direct bearing on the condition. There are a few instances in which neurotic mothers have had children with pyloric stenosis. Occasionally there are families in which more than one member has had the lesion.

The morbid anatomy of stenosis is fairly constant. There is a slight thickening of the mucosa and submucosa, a marked hyperplasia of the circular muscle coat and a slight thickening of the longitudinal coat. Quite constantly in these cases one or more longitudinal folds of mucosa are found running the entire length of the thickened pylorus. This change in itself tends to produce a certain amount of obstruction. It is probably a result of the narrowing of the lumen throwing the surplus mucosa into folds. As a result of the partial obstruction, there is a slight enlargement of the stomach. The muscularis gradually increases in thickness as the pylorus is approached. At the pylorus the thickening varies. In mild cases no mass can be palpated, but in severe cases the mass is palpable even in patients who are not extremely emaciated. In these extreme cases on opening the abdomen, an olive shaped mass from 2 to 4 cm. in length and from 1 to 3 cm. in thickness can be felt in the region of the pylorus. The upper end of this mass increases in size gradually while the lower end ends more abruptly. This thickening at the pylorus protrudes into the lumen of the duodenum below simulating a cervix uteri. The mucous mem-

9. Cautley and Dent: *Lancet*, Dec. 20, 1902, p. 1679.

10. Osler: Reprint in *Arch. of Pediatrics*, 1903, xx, 355.

11. Ibrahim: *Ergebn. d. inn. Med. u. Kinderheilk.*, i, 1908, 208.

12. Southerland: *Lancet*, 1907, i, 725.

13. Burghard: *Transactions Clinical Society, Lond.*, 1907, xi, 122.

14. Rogers and Howland: *Archives of Pediatrics*, 1906.

15. Downes: *Jour. Am. Med. Assn.*, 1914, lxii, 2019; *Surg., Gynec. and Obst.*, 1916, xxii, 257.

16. Evans: *Lancet*, 1915, clxxxviii, 1217.

17. Walton: *Annals of Surgery*, 1914, ix, 342.

18. Scudder: *Boston Med. and Surg. Jour.*, 1915, 166.

19. Straus: *Jour. Am. Med. Assn.*, 1915, 611.

20. Sturgis: *Surg., Gynec. and Obst.*, 1915, xxi, 447.

21. Thompson: *Brit. Med. Jour.*, 1902, Sept. 6.

22. Mya: *Monatschr. f. Kinderheilk.*, 1905, October.

23. Quoted by Tiegerstedt, *Physiologie des Menschen*, 1897, I., 269.

24. Howell: *Text Book of Physiology*, 1911, p. 710-713.

brane of the duodenum is reflected back over the protrusion and becomes continuous with that of the pylorus at the small opening in the center of the pyloric protrusion. The reflection causes a "pouch" around the protrusion. In pyloroplasty this point is of value. On palpation the thickened part is found to extend well beyond this reflection. In carrying the knife along the thickening, the mucous membrane of the pouch may be too closely approached and a perforation may follow. For this reason blunt dissection is desirable in this operation. The wall of the duodenum below is normal.

The following cases are hypertrophic pyloric stenoses:

CASE 3.—The body was that of a white male 7 weeks of age. The patient was brought into the Children's Hospital at the age of 6 weeks. The complaint was "vomiting and loss of weight." Vomiting occurred at any time from a few minutes after feeding to several hours after feeding. Occasionally a feeding was retained.

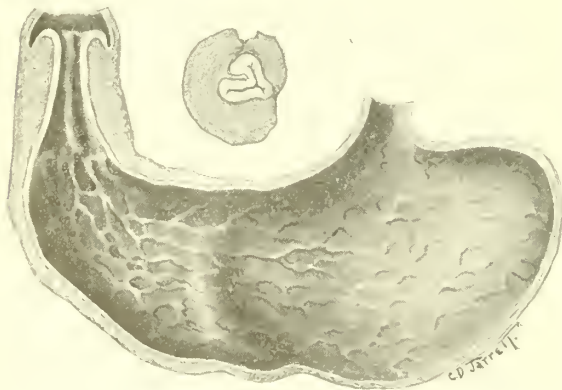


Fig. 1.—Illustrates the gradual thickening of the muscularis as the pylorus is approached. The constriction of the lumen at the pylorus is shown throwing the mucosa into a longitudinal fold. The thickening of the mucosa toward the pylorus is clearly seen. Projecting into the lumen of the duodenum is the cervix-like mass. The small cross section shows the effect of the pyloroplasty in this case, the muscularis having been divided in two places. In comparison with Figure 3 note the difference in size, the thickened muscle wall in this instance tending to hold the stomach to its normal size.

On physical examination the child was found very much undernourished. Visible peristalsis was present in the epigastrium. A very small, hard mass, was palpable in the mid-epigastrium. Examination was otherwise negative.

While in the hospital the child continued to lose weight and the vomiting was not improved by medical treatment. At operation one week after admission a pyloroplasty was done. The vomiting continued after the operation. Sodium carbonate was given in considerable doses. Three days after operation symptoms of acidosis appeared. Blood analysis showed a hydrogen ion index of 7.3, indicating an alarming increase in acidity. Large doses of sodium bicarbonate were given with some improvement. Two days later the child died very suddenly.

At necropsy an abscess measuring about 4.5 cm. in diameter is found in the axilla near the site of a previous hypodermoclysis. A small abscess is found in the wound of the laparotomy. Below this wound there is a small area of localized purulent peritonitis.

On opening the abdomen an ovoid mass, hard in con-

sistency, measuring 2 cm. in length is palpable in the region of the pylorus. Adhesions of the omentum, mesentery and transverse colon to this mass are found.

The stomach is distended. On filling the organ with water the fluid is forced through the pylorus by application of considerable pressure. On filling the upper end of the duodenum with water a considerable leakage of fluid is seen from the lower end of an operative incision along the pylorus.

The stomach measures 9 cm. in length. Anteriorly the greatest diameter is 3 cm. Laterally the greatest diameter is 2.3 cm. The wall, near the cardia, measures 1.5 mm. in thickness. Near the pylorus the wall measures 3 mm. in thickness. The thickness gradually increases toward the pylorus, the greater part of the thickening being in the muscularis. The mucosa and submucosa are slightly thickened. The pylorus is 1.5 cm. in length. The wall is 5.5 mm. thick. In the lumen the mucosa is thrown into a longitudinal fold of considerable size. The lumen admits a 5 mm. probe. The thickened pylorus protrudes below into the lumen of the duodenum suggesting a cervix uteri in appearance (Fig. 1).

Extending longitudinally along the posterior wall of the pylorus a healing operative wound 1.5 cm. in length is found. The wound is gaping and extends almost as far as the mucosa. At either end of the incision the peritoneum is sutured to the wall of the pylorus. The peritoneum is adherent along the entire length of the wound. Anteriorly one third the distance of the circumference of the pylorus a similar incision running parallel to the first is found. Both incisions extend down to the mucosa. At the lower end of the anterior wound the bottom of the wound becomes continuous with the lumen of the duodenum at the pouch formed by the reflection of the mucosa over the protruding pylorus. The opening into the duodenum is about 2 mm. in diameter and has rounded edges.

Along the upper two thirds of the anterior aspect of the pyloric incision firm adhesions of the omentum, mesentery and transverse colon to the wall are found. The lower one third of the wound is gaping and filled with greyish white exudate. Adhesions have sloughed at this point. There is a slight inflammatory reaction around the perforation. No fecal material is found outside the duodenum. No other abnormalities are found.

Microscopically there is great thickening of the pyloric wall. The serosa is normal. The longitudinal muscle layer shows a moderate degree of hypertrophy. There is enormous hypertrophy of the circular muscle coat. There is thickening of the fibrous coat just outside the muscularis mucosa. The muscularis mucosa shows considerable thickening and with part of the fibrous coat dips down with the mucosa forming the fold described above. The submucosa is more dense with fibrous tissue than is normally found. The mucosa shows considerable thickening.

CASE 4.—At necropsy the body is emaciated. An operative wound 8 cm. in length in the midline of epigastrium is found. Anteriorly the stomach presents a smooth surface. Posteriorly a loop of jejunum is sutured to the wall of the stomach near the pylorus. The pylorus is thickened, measuring 2 cm. across. This mass is hard on palpation. On section the entire wall of the stomach is thickened and this thickening increases toward the pylorus. The wall is 6 mm. in thickness at the pyloric ring, the thickening being in the muscularis. An opening 2 cm. in diameter is found in the posterior wall 3 cm. from the pylorus. Through this opening the cavity of the stomach becomes continuous with that of the jejunum.

Microscopic Examination: The epithelium of the lower part of the stomach is lost. The submucosa shows an infiltration of lymphoid cells and there are a few polymorphonuclear cells. The muscular coats throughout the wall of the stomach are thickened.

There is a bronchopneumonia. Parenchymatous degeneration of kidneys, liver and spleen is found. No other abnormalities are found.

CASE 5.—The child was brought to the Children's Hospital three hours after birth which occurred at the end of the seventh month of gestation. It was put in the warm room. It vomited all feedings and died at the end of twenty-four hours.

At necropsy the organs are found in their normal relation. The thymus is large. The ductus arteriosus and the foramen ovale are patent.

The stomach is small, the fundus forming a pouch 2.5 cm. in diameter. The pyloric end for a distance of 2 cm. is tube-like (Fig. 2). It is firm and hard to palpation. There is thickening of the muscularis in the pylorus, the walls measuring 3 mm. in diameter. There is a longitudinal fold in the mucosa and it is somewhat thickened. No other abnormalities are found. From the fact that patient is one of twins, the other being stillborn, and from the fact that the pancreas showed microscopically the lesion of syphilis, the condition is strongly suspected in the case, although Wassermann reactions have not been done on the parents.

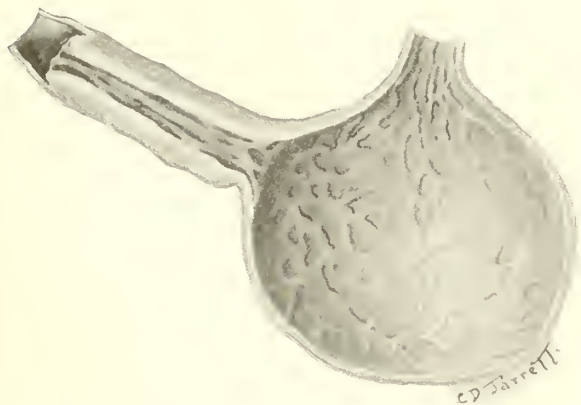


Fig. 2.—Note the peculiar shape due to muscular thickening toward the pylorus. Here as in Fig. 1 all the coats are thickened, the longitudinal fold in the mucosa at the pylorus being very noticeable. This case at the seventh month of gestation has all the essentials of congenital hypertrophic stenosis.

In addition to these cases eleven cases of pyloric stenosis have been treated in the Children's Hospital and in the Washington University Dispensary during the last few years. Operations have been performed on nine cases and all except one of these cases resulted in apparent cure. In three of the cases, posterior gastrojejunostomy was done. In six cases pyloroplasty was done. The cases in which emaciation was not extreme showed immediate improvement and up to the present apparent cure in each instance followed operative procedure. One case died of acidosis five days following operation. Necropsy was not permitted. Of the three cases treated medically, all showed improvement. Atropin sulphate, 1:960 dilution in water, was given by mouth in 1 and 2 minim doses fifteen to thirty minutes before feedings. Alkalies were given in one of these cases. Other cases of pyloric spasm have been similarly treated with good results. Unless the case is frankly one for

operation or there is some immediate cause for operative procedure such therapeutic measures are employed before operation is undertaken. Two or three of the patients which were operated on had previous medical treatment. These results as well as those recently reported are in striking contrast to the experience of a few years ago when the mortality was about 50 per cent.

These cases demonstrate that hypertrophic pyloric stenosis may occur as a congenital condition as early as the seventh month of gestation.

In mild cases medical treatment is of value, apparently effecting cure of symptoms caused by the spasm and by the partial obstruction. In cases where nutrition is good medical treatment should be tried before operation is resorted to.

Since the mortality is now practically made up by those children in which wasting has become advanced, with a marked lowering of resistance, early operation in those cases needing it is essential.

Of operative procedures, the method of pyloroplasty meets the immediate demand more favorably because it shortens the time of operation by one half. The ultimate results of this method are unknown because of its recent use. Pneumonia and acidosis tend to follow more frequently in long anesthetics. In this procedure blunt dissection is of advantage in severing the muscle coats of the pylorus, for in so doing perforation is not so likely to occur.

ATRESIA OF THE PYLORUS

Atresia of the pylorus is rarely met with. In reviewing the literature (1905) Kreuter found four cases. Lesshaft²⁵ reported a case. Von Ruess²⁶ reported a case in 1914. In 1905 Little and Helmholtz reported a case. Three types are found. With the first type there is a thin membrane stretched across the lumen. In such cases the mucosa on either side supported by a thin layer of connective tissue forms the obstruction. The stomach is dilated and apt to be thin walled while the duodenum below is normal.

The second type is that in which the obstruction is in the form of a solid mass of varying size. With this lesion Kreuter believes vacuolization has not occurred after developmental proliferation of the endothelium which has formed the embryonal obstruction. In this type there is apt to be hypertrophy of the muscularis and increased fibrous tissue in the wall of the stomach.

The third type is that in which we find complete absence of the pylorus. The case reported by Little and Helmholtz²⁷ was of this character.

25. Lesshaft: *Jahrb. f. Kinderheilk. (ref.)*, obschtsch. Russk. wiatschei so. 1882-83 q. p. 153, xxii, 164.

26. Von Ruess: *Enzyklopaedie d. klin. Med., Die Krankheiten des Neugeborenen*, 1914, p. 223.

27. Little and Helmholtz: *Bull. 1 Johns Hopkins Hosp.*, 1905.

Various views are given concerning the etiology of the condition. In 1839 Ammon attributed it to arrested development of two parts. Struebel and Valenta thought the condition due to volvulus with failure to return to the normal position. This, they thought, resulted in peritonitis with disturbance of blood supply and atrophy of the part. Schottelin and Silbermann suggest fetal peritonitis, probably luetic as a cause of the lesion. Kütner and Wyss²⁸ think it may be caused by lesions of arteries or by absence of arteries. In the case of Little and Helmholz there was absence of arteries at the site of the missing part.

CASE 6.—A full term, white female infant, was brought to the Children's Hospital on the second day of life with the complaint of vomiting. Previous to admission peristalsis in the epigastrium was seen by the family. The family history gives no evidence of syphilis.

Physical examination revealed a slight oozing of blood from the mucous membranes of the mouth and vagina. The patient continued to vomit. A brown

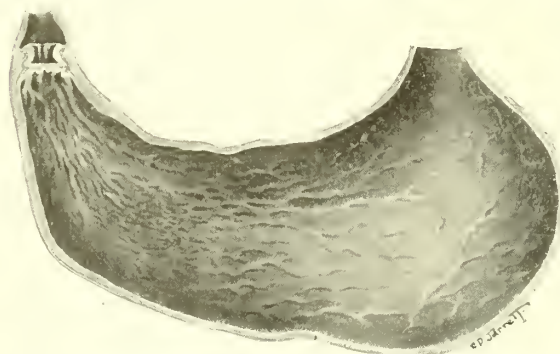


Fig. 3.—The large size of the stomach is quite noticeable, when we know the patient died in the second day of life. The walls are considerably thinner than those of the pyloric stenoses (Figures 1 and 2). The occluding membrane is shown here as it appears in the gross specimen.

fluid was obtained by lavage. This fluid gave a positive guaiac test. Four feedings of two ounces of diluted breast milk were given at intervals of three hours. Very little was regurgitated and very little was obtained by tube just before the next feeding. The oozing of blood continued. Twelve cubic centimeters of blood from an adult was given intramuscularly. Twelve hours later the oozing was more marked. The stools were apparently normal. Cultures of the stools were not taken. The patient died early in the third day of life. The clinical diagnosis was melena and probability of intestinal obstruction in the region of the pylorus.

At necropsy the thoracic organs are found normal excepting for the presence of minute hemorrhagic areas in the lungs. The abdominal organs are normally disposed. On filling the stomach with water a constriction in the region of the pylorus is noted. The stomach was hardened in its normal shape in 4 per cent. formaldehyde solution. The stomach measures 10.7x5x4.3 cm. in dimensions. A very inconspicuous constriction is seen midway between the two ends. The pylorus is cylindrical in shape, the wall being rather firm. Below the stomach the wall of the duodenum is apparently normal. The pylorus is seen

from below to protrude into the duodenum suggesting a cervix uteri. From below a 5 mm. probe can be passed a distance of 7 mm. into the pylorus, where it is stopped by an imperforate membrane. Section of the stomach wall shows the muscularis becoming slightly thickened toward the pylorus. The wall of the pylorus is 2 mm. in thickness. A longitudinal section shows the lumen of the stomach 1 mm. from the pyloric orifice crossed by a thin membrane 2 mm. thick and composed of two layers of epithelium separated by a grey band which resembles fibrous tissue (Fig. 3). Below this membrane the mucosa of the pylorus is bile stained; above it no bile staining is present.

This is the eighth reported case of congenital atresia of the pylorus. The child lived two days. A diagnosis of obstruction in the region of the pylorus was made because of the visible peristalsis and immediate vomiting of feedings.

The symptoms are similar to those found in extreme stenosis of the pylorus. Anatomically the stomach is larger than that found with stenosis and the walls are not hypertrophied and thickened. The only effective treatment is gastro-enterostomy and prognosis depends on early diagnosis and is always grave on account of necessity of operation early in life.

STENOSIS OF DUODENUM

Stenosis of the duodenum is not rare, but it is less frequent than duodenal atresia. In fifty-eight cases collected by Kreuter in 1905, there were forty-five cases with atresia. Stenoses of the duodenum may be constricting bands, thickenings of the wall of the duodenum, or membranes which extend into the lumen for some distance. The membranous type is the predominating form, and is found in the region of the ampulla of Vater. Its etiology, like that of congenital lesions elsewhere in the gastrointestinal tract, is indefinitely proven. Since the majority of the stenoses occur in close proximity to the ducts of the pancreas and of the gallbladder it may be assumed that disturbed development has its origin at the time of the budding off of the liver and pancreas. Constricting bands are thought to result from inflammation of the peritoneum with the resultant scarring.

The symptoms are somewhat similar to those of stenosis of the pylorus. Vomitus from these patients is more apt to contain bile, however, than is the vomited material of stenoses higher up. The vomiting occurs after the lapse of a longer period following feedings than does the vomiting caused by stenoses higher in the tract. Constipation is a marked symptom.

In the following case stenosis of duodenum by occluding membrane was found.

CASE 7.—The child, a white female, 2 years of age, was brought into the Children's Hospital with the complaint of vomiting from the time of birth.

On physical examination the child showed a rachitic rosary, was emaciated and listless. Visible peristalsis was seen in the region of the epigastrium.

28. Quoted by Little and Helmholz: Bull. Johns Hopkins Hosp.

Stomach analyses were made while the child was in the hospital. On one occasion the stomach content was taken fifteen hours after the last food had been taken. Partially digested bread and milk were obtained. Five hours later 2 ounces of sour smelling mucoid material were obtained through the stomach tube. The total acidity was 55 per cent., the free hydrochloric acid being 17 per cent. Lactic and butyric acids were present. While in the hospital the child had severe coryza and bronchitis. On this account operation could not be done until three months after admission, when gastrojejunostomy was done. The child suffered profound post-operative shock and died twenty-eight hours after operation.

At necropsy on opening the abdomen the wound of gastroenterostomy is found in good condition. There is considerable constriction at the pylorus and the muscularis of the pylorus is thickened. The duodenum in the first and second parts show an immense dilatation. The transverse portion is bent sharply on itself, forming an acute angle. On superficial examination it appears continuous with the descending portion. The ascending portion shows less dilatation than the descending part. On slight pressure gas can be forced from the first part into the second part. This marked distension causes the duodenum to occupy the entire retroperitoneal space from a level of the liver to that of the crests of the iliac bones. The transverse colon crosses it obliquely and is found by adhesions to it. The walls of the duodenum are thickened. In an angle at the junction of the ascending and descending portions of the duodenum lies the artery supplying the colon and mesentery.

On opening the duodenum the mucosa is congested, thickened and is bile stained. The descending part forms apparently a blind pouch in which eighteen plum stones and two cherry stones are found. In the right margin of the pouch at a point 2 cm. from the bottom is a double fold in the mucosa resembling a valve. In the groove between the crests of this fold a small opening 6 mm. in diameter forms the communication with the lower alimentary tract through a canal about 1 cm. in length. Arising from the inner wall of this canal and stretching across the lumen of the duodenum is a membrane 2 mm. in thickness composed of two layers of mucosa with fibrous supporting layer. In the outer wall of the canal described above and opposite the point of the occluding membrane the openings of the pancreatic and bile ducts are found. The remainder of the gut is apparently normal. The lungs show broncho-pneumonia. All other organs are normal.

This child lived two years, having an occlusion which obstructed greatly the passage of food. There was considerable stasis with accumulation of indigestible food material. It is of interest that the intoxication commonly met with in mechanical obstruction at such a level did not occur. This is explained by the fact that the blood supply of the intestinal wall was not altered and that there was no breaking of the mucosa.

The lesion was so near the pylorus that differential diagnosis would have been very difficult to make clinically. On the other hand the great distension of the duodenum caused it to occupy an abnormal position. In such a case from physical examination one might think the lesion to be lower in the intestinal tract. This case illustrates very well the futility of efforts to localize these lesions clinically.

STENOSIS OF DUODENUM BY CONSTRICTING BAND

CASE 8.—The child was admitted to Children's Hospital at the age of 5 months with a complaint of vomiting during the past four months. The patient was emaciated, did not gain in weight while in the hospital and had a severe diarrhea during the last two weeks

of life. The child died very suddenly, presumably of suffocation following aspiration of vomitus.

At necropsy the abdomen is distended. The stomach and intestines are filled with gas. The coils of intestine are suspended by a lengthened mesentery, which is twisted, allowing the intestine to lie in front of the transverse colon. The lesser curvature of the stomach forms a sharp angle, the pyloric end being in a vertical position. The duodenum is covered with peritoneum in its entire length. It is not bound down to the posterior abdominal wall, but is caught in the lengthened mesentery of the small intestine. At the junction of the duodenum and the jejunum a small band of peritoneum forms a constriction which prevents gas from being expressed into the intestine from above. The stomach is normal. Peyer's patches and the solitary follicles of the small intestine are enlarged. The other organs are normal.

STENOSIS OF THE JEJUNUM

Congenital lesions of the jejunum resemble those of the duodenum in symptomatology. Diagnosis of the location of the defect is difficult and uncertain. Kreuter and v. Reuss quote methods of locating the lesion during life proposed by various observers. In these descriptions the location of the visible peristalsis is considered of value in determining the location of the lesion. This method is at best only relative. Walz pointed out that the color and amount of the stools may serve to determine if the lesion is above or below the pancreatic and common bile ducts. This, of course, is based on bile content of the stools.

Wyss pointed out that stools from children having atresia contain few or no intestinal bacteria while those having stenosis show normal flora.

The following case is one of stenosis of the jejunum by occluding membranes:

CASE 9.—The child, a moribund colored female 1 month of age, was admitted to the hospital dispensary. The patient had been ill three days and showed extreme intoxication. Death occurred a few minutes after admission.

At necropsy the body is emaciated, measures 50 cm. in length and weighs 2,240 grams. Milk can be expressed from the breasts. The stomach, duodenum and upper part of the jejunum are distended. The enlargement of the jejunum ends below in a sharp constriction of the gut. The jejunum passes downward along the left abdominal wall and thence across the abdomen to the region of the head of the cecum. At a point 32 cm. from the pylorus, a constriction is found. Above this constriction the gut is of a uniform size measuring about 3 cm. in diameter. The obstruction consists of two thin membranes situated 6 cm. apart. On opening the gut a greenish semifluid substance is found between these membranes and above them. The openings in the membranes are very small, the upper one measuring only 1.5 mm. in diameter. The opening in the lower membrane is somewhat larger measuring 3.5 mm. in diameter. The membranes are about 1.5 mm. in thickness and are composed of two layers of mucosa, which become continuous through the perforation, separated by supporting fibrous tissue bands. The other organs show no abnormality.

CONCLUSIONS

The symptoms of congenital obstruction in the gastro-intestinal tract appear early in life, in most instances during the first half year.

Congenital hypertrophic pyloric stenosis is found as early as the seventh month of fetal life.

Of the cases seen here 85 per cent. of the patients were males.

The prognosis is largely dependent on early diagnosis.

Medical treatment accomplishes relief and apparent cure in a fair percentage of cases.

Weak solutions of atropin sulphate are of value in the medical treatment.

Surgical treatment, if necessary, should be resorted to before the individual has become emaciated.

Operative procedure to give best results should be done quickly, for long anesthetics at this age are dangerous.

Best results are obtained by using the simple method of pyloroplasty.

The morbid anatomy of hypertrophic pyloric stenosis shows all layers except the serosa to be affected, the greatest hypertrophy being in the circular muscular coat.

PROTEIN INDIGESTION IN THE INFANT

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IV

In the previous articles an attempt was made to give a critical analysis of the food problem as viewed from the standpoint of the practitioner. We concluded that the indigestion and malassimilation of protein lies at the foundation of most of the acute and chronic digestive disturbances of artificially fed infants. There is, however, one group of symptoms which should still be discussed in this connection. I refer to the intoxications.

The clinician has long been familiar with a group of symptoms which differed somewhat from the syndrome that accompanies the acute infectious diseases and which has its origin in the intestinal canal. It is true, the clinical features of this syndrome have never been clearly defined, but in general we regarded the fact that the nervous symptoms (stupor, convulsions) as being especially characteristic. To these were added anomalies of the respiration and the circulation. We called this group of symptoms which so often disappeared on the administration of a purgative and the institution of a short starvation period gastro-enteric intoxication.

Finkelstein attempted to separate a group of

symptoms from this confused mass and called it alimentary intoxication, or food intoxication. He strongly urged that milk sugar caused the disturbance; later, he and his pupils tried to show that the salts of the food may produce similar symptoms. These hypotheses are generally discredited at present.

Clinical experience abundantly proves that infectious diarrhea often begins with these severe symptoms of intoxication. The typical dysentery may have as its prodromal symptoms fever, convulsions, stupor, respiratory change and circulatory depression. In fact, Bluhdorn has admitted that the symptoms at the onset of a bacillary enteritis is indistinguishable from Finkelstein's intoxication. We must conclude that one source of gastro-enteric intoxication is an infectious process in the intestine. My own experience this summer, a report of which will appear later, corroborates this view.

Then symptoms of intoxication may appear after the ingestion of some protein food, as Holt has reported. That such a condition may occur under clinical conditions is possible.

Then, there is the intoxication produced by the protein poison of Vaughan, the symptoms produced by peptone and the peculiar intoxication when amino-acids are injected into the blood, all these suggesting that after all it is to the nitrogenous substance of the intestinal contents that we must attribute the disturbance known as gastro-enteric intoxication.

Finally, the appearance of a true acidosis, as Howland has taught us, in so many cases of severe digestive disturbances often serves to confuse the clinical picture. We find that while the administration of an excess of sugar may result in alimentary intoxication, it by no means follows that sugar is the intoxicating agent. Rather are we inclined to assume a perverted protein digestion and absorption, following the law of correlation of food elements. Again and again I have seen a severe acidosis in children with dysentery when only egg albumin and peptone preparations were administered. No doubt an excess of sugar being deposited in a colon seething with active bacteria robs the body of alkalies, as is true in diarrhea, and thus predisposes to an acid intoxication; but, on the other hand, the excessive oxidation of protein substances is hindered by the presence of carbohydrates and the alkalinity of the blood conserved. Yet there are some proteins (casein) which do not increase the intoxication, probably by the excessive amount of ammonia formed from them. An increase of the ammonia nitrogen seems to be the rule when a high casein percentage is fed.

The studies in metabolism have really helped the practitioner very little, I believe chiefly because only the end products are studied. What

difficulties the body overcomes in digestion and intermediary metabolism is not shown, hence accurate clinical observation is more imperative than ever. Probably the greatest progress has been made by Mendel, Osborne and others, who studied the effect of food elements in animals for a prolonged period by excluding various protein radicles from the diet. Such experiments will probably give us more scientific data than the study of end products, and it is to these that the clinician must look for the greatest help.

In practice there are no simple protein, fat or carbohydrate indigestions. The infantile organism tries to put all its best efforts in the protein first. The fat and carbohydrate must wait. Hence the fat indigestion and carbohydrate indigestion are only final expressions for protein indigestion. The symptoms can often be removed by taking away the fat or the carbohydrate, but the state of the nutrition may be unchanged, because the primary difficulty has not been removed.

The conclusion of this study, then, is that there is no pure protein indigestion, but that protein substances are concerned primarily in nearly all clinical forms of indigestion and diarrhea and intoxications. Probably the lactalbumin is much more troublesome than precipitated and acidulated paracasein. Practically, too, digestive disturbances are successfully treated by adjusting the strength and altering the character of the protein substance.

The feeding of the young infant involves a most intricate problem in which numerous factors must engage our attention. The old writers (e. g., Stewart, Eberle) seventy years ago, advised that infants be artificially fed with a mixture containing equal parts of cows' milk and water and adding cane sugar. This formula almost exactly resembles the modern formula of simplified feeding. True, Jacobi added a cereal decoction which was later dextrinized and now is replaced by maltodextrin preparations. It is really questionable, however, that any special progress has been made in feeding the young infant artificially. In spite of all our researches modern science has no better food to offer than the old formula suggested by writers nearly one hundred years ago.

And yet there is a gain. This consists in the pediatricist's ability to alter the food components so that the diet is adjusted to the digestive power of the infant and at the same time to fulfill the caloric requirements. In the adjustment so many things must be considered that it is not always possible to make the adjustment at once. Several trials may be necessary but it is not often that the experienced pediatricist fails completely, although perfect nutrition throughout the whole of infancy is the exception rather

than the rule. The infant must learn to digest and assimilate the offered protein and at the same time take in enough fuel to keep the oxidative processes going. Hence a period of learning, a period of adaptation, is necessary in all infants.

It is the duty of the parent who can not furnish the natural food to teach the infant how to thrive with the artificial food. Some babies learn rapidly, but others very slowly. The physician must not be impatient. The most aggravated forms of malnutrition get well in time. Meanwhile, we try by altering the food components to make the baby more comfortable. It has been well said that each baby is a law unto itself, but very few rules have been formulated how the food may be adapted to fit the individual child, and we find different pediatricists using different means.

It might be profitable to discuss the various methods employed in at least one of the digestive disorders of infancy, namely, simple malnutrition. (I prefer this term to weight or balance disturbance.)

1. The protein is altered. The milk is peptonized, fermented or citrate of soda added. Or it may only be diminished and other ingredients added to increase the caloric content. Sometimes dextrans or other substances are added to change the character of the milk curd. Sometimes the protein is split so that the whey content is increased. Any of these means may be successful.

2. The fat is changed, either by diminishing the quantity, or by partially substituting other fats, as cod liver oil, olive oil.

3. The sugar is increased in quantity so that fermentation is favored, or a mixture of carbohydrates is administered. In many cases fermentation is favored by the addition of an easily fermentable sugar (Mellin's food, malted milk, malt soup extract). Sometimes excessive fermentation is diminished by the use of carbohydrates which are with difficulty fermentable (roasted flour, barley flour, dextrans, dextromaltose).

In fact, this tendency to increase putrefaction or fermentation is the principal object of attack in adjusting the diet of the infant. If the fermentation processes are very excessive, we may suppress the protein by giving pure cereal decoctions, and in older infants (after 6 months) this treatment is generally successful. In young infants we must generally depend on pure protein preparations (buttermilk, casein buttermilk). In putrefactive conditions the fat may be lowered, or the protein may be lowered, or a fermentable carbohydrate increased. Care must be used in the use of the carbohydrate, that only a small quantity enters the infected portion of the intestine, otherwise diarrhea results.

CONCLUSIONS

The syndrome of malnutrition (milk injury, bilanz storing) is probably produced by an excessive putrefaction of protein residue in the cecum and colon.

Excessive intestinal fermentation is favored by the presence of nitrogenous substances (from the food or intestinal secretions).

Intoxications, favored by fermenting carbohydrates, are primarily dependent on imperfect protein digestion and absorption.

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THE USE OF THE ROENTGEN RAY ON
THE GASTRO-INTESTINAL TRACT
OF CHILDREN

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NORMAL STOMACH

In 1911 Fleish and Peteri¹ attempted to determine the size and shape of the normal stomach of nurslings and children by the use of bismuth and barium in their feedings. The experiments were based on fluoroscopic examinations.

The technic: (a) The plates were made with the subjects in a vertical position; (b) plates were placed 24 inches from the anode; (c) the exposures were instantaneous; (d) the tube was focused on the umbilicus. Ten grams of bismuth to 100 c.c. of the feeding were used. In the majority of cases it was given by gavage.

The results: The child's stomach approaches the adult type more nearly after the second year. The form of stomach depends upon the age of the child and the character of the food ingested. They found that the roentgen ray gave them no help in studying the functioning ability of the stomach.

Pisek and Lewald² of New York later undertook the same work. In their series the age varied from 2 days to 20 months. The interval between the meal and the first exposure was from one to five seconds. Serial roentgenograms were made. Subsequent exposures were made at intervals of from ten minutes to twenty-four hours, according to the nature of the experiment. Their conclusions were that there is no normal type of stomach in infants; that the type is horizontal rather than vertical. They recognized three types: (1) That described as the ovoid or Scotch bag-pipe shape; (2) the tobacco pouch shaped stomach; (3) the pear-shaped stomach with the base above and to the left. The shape, according to them, does not depend

on the amount or character of food, but rather on the quantity of gas contained. The stomach extends to the liver on the right, and at times fills the entire transverse space from one abdominal wall to the other. In the majority of cases the pylorus was found high and behind the pyloric third, but at times its position could not be determined. In a number of cases food was seen in the duodenum one minute after gavage. The average was five minutes. The large number of stomachs emptied themselves in one hour. Alkalies had a retarding action, increasing the time to four and one-half hours. At times peristaltic waves were seen along the greater curvature.

Chapin³ made a radiographic study of the gastro-intestinal tract in infants. (a) He gave barium meals to two infants, one, age 8 months, was having convulsions; the other, age 7 months, had loose stools. The barium meal traveled through the intestinal tract in seven hours. His object was to measure the motility of the bowels. Normal peristalsis, according to him, occurs in jerks, and in one case the whole transverse colon was emptied into the descending colon in three seconds, as seen by the fluoroscope.

(b) Enemas of barium were given. Ten infants were used, from 3 to 25 months of age. He used the roentgen ray tube with the intensifying screen. Exposure was $\frac{1}{10}$ second; $\frac{1}{2}$ ounce of castor oil was given four hours before; they were afterward fed on barley water. Four heaping teaspoonfuls of barium were added to each 8 ounces of acacia. The amount retained varied from 4 to 16 ounces. The feet were held higher than the head. The rectal tube was inserted 4 inches; the funnel was held 18 inches above the child; the buttocks were held tightly together until the picture was taken, which was $\frac{1}{2}$ minute after the injection. The face was turned downward; the tube was placed 14 inches from the plate.

Results: There is much difference in the various parts of the colon as regards mobility. The hepatic flexure, transverse colon and sigmoid flexure showed the greatest variability. Any injected substance that got past the sigmoid flexure reached the cecum very quickly and without using much force, as these pictures were taken not more than a minute after injections. In one case the ileocecal valve was patent, the barium being distinctly seen in the small intestine, and in another case it was doubtful but probable. Case⁴ reports 200 gastro-intestinal cases with 33 incompetent ileocecal valves as determined by barium injection. Kraus⁵ found only 12 out of 150. He says that the ileocecal valve is patent in newborn infants.

1. Fleisch and Peteri: Jour. Am. Med. Assn., 1911, lvii, 435.
2. Pisek and Lewald: Am. Jour. Dis. Child., 1913, vi, 232.

3. Chapin, H. D.: Jour. Am. Med. Assn., 1913, lxi, 1419.
4. Case, J. T.: Am. Quart. Roentgenol., 1912, iv, 77.
5. Kraus, O.: Lancet, 1912, i, 498.

The study of the sigmoid in the above series showed remarkable variations both in form and situation. The sigmoid seems to occupy a greater space than heretofore believed. It may occasionally reach as high as the transverse colon. It is rarely if ever possible to pass a tube through this structure. Tubes could be passed only to the bend or apex of the sigmoid flexure. Soper⁶ reported 60 cases in which the position of the tube was verified by radiographs and the tube was always found coiled up in the dilated rectum.

Ladd,⁷ in a series of 14 cases with 124 plates, sees a lack of peristalsis in infants' stomachs as compared with adults. Only twice has he been able to show the outline of the duodenum distinctly. In normal digestion bismuth appears in the small intestines as soon as feeding is completed, showing that a considerable amount of food passes into the duodenum without undergoing gastric digestion. When a bismuth feeding is given and another feeding follows at the end of the regular two and one-half or three hours' interval, the bismuth residue from the first feeding does not appear to mix intimately with the new feeding, but as a rule passes out into the small intestines much more quickly than it does when left to itself. The suggestion is strong that the distention of the stomach by a new feeding, if not excessive, stimulates peristalsis and favors the expulsion of the bismuth residue into the duodenum. On the other hand, if the distention is excessive peristalsis may be inhibited and the emptying time of the stomach delayed.

PYLORIC STENOSIS

Pisek and Lewald⁸ in 1912, in an article on the use of the roentgen ray, made the statement: "If we can determine, with a degree of exactness, by a series of radiographs that milk is retained for a greater length of time than in a normal stomach, as shown by the bismuth shadow, we can determine with a fair degree of certainty with what type of obstruction we are dealing. It would seem unfair not to early obtain a series of radiographic pictures in every suspected case so that infants suffering from a true tumor with a lumen so small as to practically occlude the passage of food into the duodenum, may be early given over into the hands of surgeons while its physical condition is still good. On the other hand cases of pyloric spasm even of a marked degree, but without tumor formation can be differentiated."

Bunts⁹ of Cleveland reviews the symptoms of pyloric stenosis as follows: (1) Persistent vomiting, projectile in character; (2) emaciation;

(3) visible peristalsis of stomach; (4) visible dilatation of stomach; (5) diminution and absence of stools; (6) anemia; (7) palpable tumor of pylorus, and concludes his paper by saying: "The addition of the roentgen ray examination of the stomach has made a very early diagnosis possible, and it is in these early cases that we must look for a percentage of recoveries far above the earlier accepted standard of 50 per cent."

Orr¹⁰ of Kansas City reports a case in a child as follows: Radiographs and fluoroscopic examinations were made on the twenty-fourth day. During the first ten or fifteen minutes after the bismuth meal nothing passed the pylorus; gastric peristalsis was marked. The stomach contained a large quantity of gas. Radiographs taken after four hours showed the greater portion of bismuth meal still in the stomach. Eight hours after the bismuth meal a large portion was vomited. The Strauss operation was performed with excellent results.

According to Holt,¹¹ the roentgen findings may be quite misleading. Bismuth may pass out of the stomach through an exceedingly narrow opening and yet symptoms may be of an aggravated type. It can show at most the rate of discharge from the stomach.

Downes,¹² in a series of 21 cases says: "We did not consider it necessary or advisable to submit babies to roentgen ray before operation. On account of the extreme irritability of the stomachs, conclusions based on the emptying time are liable to be misleading, and even if a small amount of bismuth passed through the pylorus, no information would be given thereby that the story of stools and the weight chart had not already told. Aspiration has all the advantages of the roentgen ray in this condition and is more feasible."

Dunn and Howell¹³ used the roentgen ray to differentiate between pylorospasm and pyloric stenosis. In the cases of pylorospasm the roentgen ray showed immediate passage of food from the stomach. The stomach may empty itself in three hours in these cases. In pyloric stenosis the roentgen ray showed delayed motility, very little if any dilatation, and some obstruction at the pylorus. Scudder used the roentgen ray after a bismuth meal to test the motility after gastro-enterostomy in successful cases.

De Buys,¹⁴ in a paper on the roentgen ray in pyloric stenosis, deals with the posture of the infant. The position of the baby may be vertical or horizontal. While the vertical position may give better information because of its bringing the viscera covered by the liver more into view, observations made on young infants

10. Orr, T. G.: *Weekly Bulletin Jackson Co. Med. Soc., Kansas City, Mo., 1916, x, 210.*

11. Holt, L. E.: *Jour. Am. Med. Assn., 1914, lxii, 2014.*

12. Downes, W. A.: *Jour. Am. Med. Assn., 1914, lxii, 2019.*

13. Dunn and Howell: *Arch. Pediat., 1915, xxxii, 426.*

14. De Buys, L. R.: *Am. Jour. Dis. Child., 1913, vi, 344.*

6. Soper, H. W.: *Jour. Am. Med. Assn., 1909, liii, 426.*

7. Ladd, M.: *Am. Jour. Dis. Child., 1913, v, 345.*

8. Pisek and Lewald: *Arch. Pediat., 1912, xxix, 1911.*

9. Bunts, E. E.: *Ohio State Med. Jour., 1916, xii, 737.*

in this position are made under abnormal conditions. In the prone position the baby may be placed on the abdomen or on his back. Observations in the former position will also be under abnormal conditions, but if the baby is placed in the latter position, as he usually lies after feeding, the observations are more apt to be natural. Of course, it is essential that the detail should be brought out so that if it be necessary the position should be changed to obtain the best results, always endeavoring to have the conditions as nearly normal as possible. The information to be derived from the radiographs regarding the stomach is the position, size, shape, size of flow through the pylorus when the flow begins, and the length of time necessary to empty the stomach completely. An absence of the shadow is also significant. The length of time required for the stomach to become completely empty has been shown to be variable.

Leven and Barret¹⁵ in a large number of infants from 2 to 6 months old, found the emptying time of the normal stomach to vary between one and three quarter hours and two hours, for both woman's and cow's milk. Pisek¹⁶ believes the probable emptying time to be less than three hours, and the average final emptying time to be three hours. Ladd¹⁷ states that the stomach appears to empty itself of the greater part of its contents in from one and one-half to two and one-half hours, and that the residue is emptied very slowly, often after remaining for four, five or even seven and one-half hours in both breast-fed and bottle-fed babies.

OTHER ABDOMINAL CONDITIONS

Morse¹⁸ in a paper on "Obscure Abdominal Conditions," cites the following interesting cases:

Boy, about 6½ years; complaint, recurrent vomiting; appendectomy and circumcision were performed for relief of symptoms. A roentgenogram taken while he was lying down, immediately after a bismuth meal, showed that the lower border of the stomach was on the level of the crests of the ilia; six hours later the stomach was still lower. Another roentgenogram after a bismuth enema showed a marked prolapse and consequent kinking of the large intestine. Diagnosis: Temporary intestinal obstruction due to splanchnoptosis.

CASE 2.—Girl, 10½ years old; complaint, constipated with frequent attacks of severe pain in lower abdomen. Roentgenogram was taken after a bismuth meal and enema. The hepatic flexure was only a short distance above the crest of the ilium and the transverse colon sagged down in a V shape, so that the lower portion reached nearly to the pubis. The colon was also distended. Diagnosis: Interference with intestinal peristalsis resulting from malposition of the colon.

15. Leven and Barret: *Radioscopic Gastrique et Maladies de l'estomac*, 1909, p. 173.

16. Pisek and Lewald: *Tr. Am. Pediat. Soc.*, 1913, xxv, 150.

17. Ladd, M.: *Tr. Am. Ped. Soc.*, 1913, xxv, 74.

18. Morse, J. L.: *Jour. Am. Med. Assn.*, 1913, lxi, 1422

CASE 3.—Girl, 9½ years of age. Complaint: acute attacks of pain in the abdomen. Roentgenograms showed a stone in left kidney. Intestine was normal.

CASE 4.—Girl, aged 15½ years; complaint: constipation with colic and abdominal distress; also distention and vomiting. Roentgenograms showed marked prolapse of the stomach and small intestine with a delay in the emptying of the stomach. There was marked prolapse of the cecum into the pelvis with a prolapse of the ascending colon.

The above cases justify a diagnosis of adhesion binding down the colon and involving the duodenum, with presumably secondary prolapse of the stomach and small intestine. The constipation was probably due to obstruction caused by adhesions, and the vomiting was due to blocking.

The roentgen ray is sometimes of great assistance in diagnosing intussusception from infectious diarrhea, in both of which there is blood and mucus in the stools. In some cases of intussusception the roentgenogram taken after a bismuth enema shows a cup-shaped cap of bismuth about the lower end of the intussusception.

HIRSCHSPRUNG'S DISEASE

Of the large number of cases reported as Hirschsprung's disease in the literature we were able to find very few in which mention was made of the roentgen ray. As this is a congenital condition, we cannot include in this group cases of dilated colon in which there is a mechanical obstruction of one sort or another, such as constriction due to bands of adhesions causing a dilatation of the bowel. Without the aid of the roentgen ray such differential diagnoses cannot be made in most cases, and such diagnoses cannot stand unless they are confirmed by operative procedure or at necropsy.

We saw a case of Hirschsprung's disease at the St. Louis Children's Hospital in an infant a few months of age. After a bismuth meal and enema the diagnosis was made, which was confirmed a few weeks later at autopsy.

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FRACTURES OF THE HUMERUS*

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Adequate fixation of the humerus is especially difficult, which accounts for the frequency of nonunion, malunion and delayed union.

Failure of approximation of the fragment ends, either because of the interposition of tissue, overriding or angulation, is a most important factor; however, these conditions obtain about equally in fractures of all long bones.

* Read at the Sixteenth Annual Meeting of the Frisco System Medical Association, Springfield, May 28, 29, 1917.

Systemic conditions were formerly considered of great importance. After close investigation most of these have been laid aside—even alcoholism and syphilis are no longer taken seriously.

Ununited fracture is often the result of surgical impatience. There would be fewer cases if there was less operative work undertaken to apply internal splints to open or compound fractures. These fractures are best treated by the open method after they become closed. One gets early closure in compound fractures if infection is avoided. Our plan is to cleanse the field with 5 per cent. tincture of iodine, insert a long-nozzled glass syringe filled with the same solution to the bottom of the wound. By expelling from this position, all foreign material is washed out and the wound is thoroughly antiseptized.

Delayed union is a fairly frequent occurrence. In the course of an average repair period the surgeon removes the permanent dressing to inspect the limb—he is surprised to find, when tests are made, more or less freedom of motion at the fracture site. Often, instead of replacing the dressing to permit of a longer period of immobilization, he begins to worry about nonunion and inspects the limb each day. If union does not occur very shortly, the fracture is put in the class of nonunion long before its time. Even a fibrous union, given time and aided by efforts to promote calcification, will often terminate in a solid, bony junction.

The first law in the treatment of fractures is immobilization, which is incomplete unless both contiguous joints are included in the dressing.

The best method in fracture treatment is that which requires the least skill to carry out, rather than the fine elaboration of surgical technic.

In all fractures of the humerus that can be properly reduced the best fixation dressing is a crinoline cast which, if of the proper grade, will be just as strong and many times less heavy than plaster of Paris.

A splint of cigar box material cut in one-fourth-inch strips and stuck to adhesive plaster in such a manner as to conform to the roundness of the limb, is often of great value and should be used under the crinoline cast. This cast should be applied over sheet cotton alone, the elbow being well padded to protect the ulnar nerve; should include the shoulder to the neck and be applied as a spiral figure of eight, that extends across the chest and under the opposite axilla; should include the elbow as a right angle with the forearm semiprone that it may comfortably conform to the body; should not include the wrist and hand on account of subsequent stiffness. The entire forearm and hand should be carried in a sling.

It is especially important that fracture dressings be applied in such manner that there will

be no undue pressure with resultant ischemic contractures or paralysis. Should the above dressing be found too tight, a sharp knife, cutting on the bevel, will easily sever the cast, which will then properly adjust itself without losing its strength or usefulness. This could not obtain in the presence of a muslin bandage applied over the cotton and under the crinoline, as the muslin bandage will not stretch and cannot be cut without disturbing the cotton and rendering the dressing uncomfortable.

It is impossible to hold down a fragment of bone tending to ride up from muscular action by putting a compress over it. Since in certain instances this muscular action cannot be overcome, the companion fragment must be so adjusted as to correct the deformity.

In selected instances, oblique fractures that override may be corrected by extension and permanent traction to the arm which should be at almost right angles to the body, thus giving the muscles concerned proper and equal rest, lessening the degree of extension necessary and preventing stiffness of the shoulder joint while the arm is idle.

A simple appliance easily improvised for this dressing is made by nailing a 4 by 8 by 12 inch box in one corner of an 18 by 18 inch base. A 5 by 12 inch piece which will constitute the outer portion of the box splint is nailed to the opposite edge of the base nearest the box, the box itself acting as the inner portion of the splint, while the long side of the box fits against the body to apply as counterextension. The elbow bends around the box, thus eliminating the forearm in the dressing. It should not be included in the extension, the adhesive being applied to both sides of the arm. The extension is made by weights over a pulley at the far side of the base. The proper angle of traction is determined by the size of the axillary pad. This appliance is placed on the table at the side of the bed.

Fractures that are impossible of reduction or retention should be plated. This is best done about one week after the injury, thus allowing for coffer-damming and lessening the chance of infection. In the hands of careful, competent surgeons, bone plating is attended with little danger and exceedingly gratifying results, but should never be attempted by the unskilled.

Nonunion must be dealt with by open operation. After the bone ends are properly freshened and approximated, either a Lane plate or an autogenous bone graft should be applied.

Fixation with plates, nails or screws in fractures near or into a joint is especially important, as incorrect apposition or early motion tends to induce excessive callus formation, which limits the joint excursion and lengthens disability. Nails or screws are especially useful in T frac-

tures of the lower end of the humerus, or fractures of either condyle. If proper reduction of the condyle is possible without open operation, the nailing may be accomplished by merely nicking the skin to admit the nail. All such fixation methods must be applied extra-articular.

In the presence of internal splints, which of course are foreign bodies, any motion prevents union. Therefore, it is absolutely necessary that immobilization be positive. The above crinoline dressing answers best for this purpose and should be applied dried and removed before the operation, to be reapplied afterward.

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THE PUPIL—FROM THE OPHTHALMOLOGIST'S STANDPOINT

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As an aid to diagnosis in ocular disorders the study of the pupil probably occupies the foremost position in importance. Situated as it is about midway in the eye, its condition and action are affected by pathologic processes in both anterior and posterior parts of the globe. No examination of the eyes therefore can be called complete which does not include a careful study of the condition and action of the pupils.

The testing of pupillary activity yields usually the most accurate results when after several minutes' stay in the dark, the pupils are exposed to strong artificial light. It is a matter of common observation in cases of tabes that a much larger number of pupils are observed with imperfect responses to light when examined by the above method, rather than by the ordinary method of shading the eye in the daylight. Also, there are certain pupils of sluggish reaction which give the most noticeable responses when exposed to weak artificial light in the dark-room.

The study of the pathologic must necessarily be preceded by an understanding of where the limits of the normal lie.

The position of the normal pupil is usually a little to the nasal side of the center of the iris. However, it may be seen congenitally displaced in any direction.

The size of the pupil in general is small in infancy, large in youth and small again in old age; smaller in hypermetropia and larger in myopia than in emmetropia. After the fortieth year the difference in size of the pupils in different states of refraction is inconsiderable. Slight differences in size between the two pupils in individuals where no lesion can be detected are rather common, but such an inequality or anisocoria compels one to think of possible involvement of third nerve filaments.

Congenitally, also, instead of the round pupil there may be observed those with slight modifications toward the oval. Nevertheless the presence of an oval pupil makes the observer here again suspicious and on his guard for some present or future trouble.

The rapidity and amount of response of the pupil to the same intensity of light also varies greatly in different persons with normal eyes and normal nervous systems. Indeed the study of the pupil in ocular or nervous disorders can never be considered except as one of several points to be judged collectively in arriving at a diagnosis.

Among the pupillary reactions that may be present in so-called normal individuals might be mentioned the oculo-pupillary reflex, the orbicularis or lid reflex and the pupillary rebound. The oculo-pupillary reflex named by Von Vardy and others, is that reflex called forth by the stimulation of sensory surfaces, particularly those of the skin and mucous membranes of the eyelids. It consists in mydriasis followed by myosis, repeated in the same sequence if the stimulation is continued. The orbicularis or lid reflex first described by Van Graefe is the contraction of the pupil which sometimes accompanies the forcible closing of the eye or contraction of the orbicularis, observed after the insertion of a speculum. The pupillary rebound first described by Dr. Fry consists in a quick contraction followed by a slower dilatation to about the original size, when the eye, after being in a weak light or darkness, is exposed to a sudden strong light. Dr. Fry has noted the more frequent presence of this reflex in those neurasthenic and other disorders so frequently seen in syphilitics. Here should be mentioned also the relative dilatation and more or less inhibition of the light reflex which occurs in individuals under the influence of any emotion, fear, excitement, joy, sorrow, etc. It is frequently noticed that patients at a first observation may have quite inactive pupils, whereas later, when they have become more accustomed to the examination, the pupils will show very good light reaction. This effect on the pupils of purely mental processes it does not seem proper to designate as that of a reflex, as has been done somewhat in the German literature.

Turning now to the pathologic, we note that disease conditions in the anterior structures of the eye affect the pupil rather definitely and in a manner fundamental to diagnosis. In glaucoma dilated, and in iritis contracted, the pupil is in both cases more or less irregular and sluggish, corresponding to the amount of inflammatory edema and fibrinous exudate present in the iris. By a continuation of the latter process posterior synechia are formed which firmly fix the portion of the pupil from which they proceed. These are sometimes not accurately diag-

nosed until after the use of a mydriatic. Dr. Charles has mentioned the possibility of definitely demonstrating an iris hyperemia by noticing in the dark-room whether the suspected pupil dilates to as full a degree as its fellow, and he has called this the "pupillary reflex to darkness."

In cataract of the incipient or swelling stage the pupil is for obvious reasons inclined to be contracted and sluggishly respondent. In old age a small and feebly responding pupil may be due also to a sclerosis of the constrictor muscle fibers.

Trauma on the eyeball often manifests its most prominent and permanent effect on the pupil. The concussion of a blow may cause a complete sphincter paresis or paralysis and consequent regular dilatation. Again, small lacerations in the iris margin may result and cause paralysis in corresponding parts of the sphincter, which parts dilate and make the pupil irregular.

The effect on the pupil of disorders in the posterior part of the eye depends on their location and degree. The pupil-reflex-fiber-endings in the retina being present in greatest quantity about the macula are consequently affected in greater or less number and degree, according as the pathologic changes involve more or less the fibers going to the macula, the macular region itself, or the light rays falling on this important spot. It has been learned from observation that the retinal endings and filaments of these pupillary reflex fibers are more resistant to degeneration and destruction than are the ordinary visual fibers. For in cases of amaurosis from optic atrophy a pupillary response to strong light may be obtained for a long time following the disappearance of subjective light perception. In some of these cases where finally pupillary reaction to light has apparently disappeared, contraction has been obtained after keeping the patient for several hours in the dark, the "Erholung's Reaktion" of the pupil, so named by Saenger.

The fact that most inflammatory and degenerative processes in the fundus may cause a diminution of light perception has the effect of relatively dilating the pupil and making it respond less actively to light. Therefore, in any case where pupillary symptoms are found, an ophthalmoscopic examination is imperative before correct conclusions may be drawn.

In conclusion, it seems not inappropriate to say a few words on the Wernicke pupillary reaction. As is well known the test for this reflex is made in hemianopic eyes by noting the action of the pupil when a beam of light is concentrated alternately on the blind and seeing parts of the retina. A positive reaction occurs when the pupil is wider with the light focused onto the blind side than when it is thrown onto the seeing part: a negative reaction when the sizes

of the pupil are the same for the two positions of the light. A positive reaction theoretically should be caused by a lesion below or anterior to the optic thalamus and superior quadrigeminal body, a negative reaction by a lesion above or posterior to these lower visual centers. The probability as stated by Hess that the pupillary-light-reflex-fiber-endings in the retina are present in much the greatest number near the macula, make it necessary that the lights on the two sides of the field should be equidistant from the fixation point, so as to make the effect of dispersed light on these endings about the macula the same in each measurement. This result was probably best accomplished, and the most effective apparatus for this test elaborated, by Dr. Walker of Harvard. However, his results as we know were decidedly against this test having much value in the topical diagnosis of brain lesions, for he found the reaction present in all his cases of central or posterior involvement, which numbered four, as well as in those of anterior lesions. These results naturally lead one to his conclusions that the pupillary reflex fibers in the retina must be present in an effective number beyond the macular region, since almost always in hemianopsia the macula is spared and that these centripetal fibers are somewhat diminished in efficiency by central lesions. Dr. Walker's work, because of its careful and painstaking technic, is worthy of much praise.

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PULP STONES AND THEIR RELATION TO TIC DOULOUREUX

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That pulp stones are often factors and more often the entire cause of tic douloureux has seemingly been neglected in dealing with this malady. Other conditions in the mouth, such as pyorrhea, exposed nerves, partially dead nerves, impacted teeth and proliferative periodontitis, may produce the same results by chronic irritation of the nerve endings.

Pulp stones, or pulp nodules, as they are often called, are formed within the pulp sheath and are probably formed from the calcoglobulin of the blood. Calcoglobulin is a form of albumin occurring in calcifying tissue. Figures 1 and 2 show stones as revealed by the roentgen ray. Evidently they form by accretion, since a cross section of one examined under a microscope reveals concentric rings similar to those of calcareous shells or of pearls. The most commonly considered causative factors are chemic and thermic irritation as a result of the pulp trying to protect itself against the irritant. From per-

sonal experience I would lay the most stress on chemic irritation, since most cases which have come under my observation have been in teeth that have either no filling at all or only a very small one. Also, every pathologic case that has come under my observation has had a slight amount of recession of the gums. There may be only one stone in a given pulp or there may be several, and may or may not produce a disturbance. They are often found large enough to obliterate the pulp chamber and part of the canals, and, so far as we know, produce no disturbance. But the pathogenicity is not the result of a few weeks' or months' irritation, but in all likelihood it is the result of several years' duration.

Figure 3 shows an impacted molar which from its position will never erupt. By its growth to



Figs. 1 and 2.—Pulp stones revealed by x-ray.

completion it may produce pressure on some nerve to such an extent as to become pathologic. Note the proximity to the antrum of Highmore which complicates its removal. Figure 4 shows a case of proliferative periodontitis which is analogous to periostitis. This, in the same manner as an impaction, may bring sufficient amount of pressure to become pathogenic in nature.

I want to report three cases which are typical of several which have come under my observation.

CASE 1.—Miss H., aged 24, of an anemic type, and showing some indications of malnutrition. Patient first consulted me in 1911 complaining of a sensitive tooth or teeth. Was unable to locate anything abnormal by the diagnostic means then at my disposal. She again came under my care in November of 1913. She complained of a facial neuralgia involving the entire left side and especially the temporal region. The teeth still were in apparently normal condition but the attacks were of increasing severity and fre-

quency. The pains were of such severity that her physician was often compelled to administer strong hypnotics for temporary relief. All food and drinks had to be at or near body temperature, and she dare not expose herself to cold weather for fear of bringing on another attack.

Suspecting pulp stones I began a series of tests at two week intervals, with a faradic current. (The galvanic current from any wall plate will answer the same purpose.) The teeth were charted and the

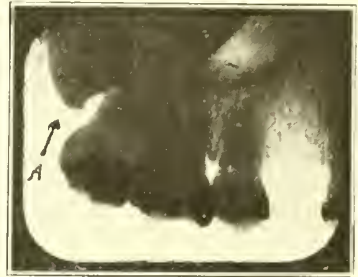


Fig. 3.—Showing impacted molar at A.

amount of current necessary for a response noted and recorded. After some four or five tests, the records showed that an upper left first molar responded quicker than the rest and also was variable. This tooth carried a filling smaller in bulk than a pinhead. After devitalization a large pulp stone was found and after its removal the disturbance disappeared and did not occur again during the following year.

CASE 2.—Mrs. G., wife of a physician. I was called in consultation with the husband and two other physicians, in March, 1914, to see if any teeth were "factors" in the case. The case history was typical. The last attack began about two weeks previous and kept the patient in bed, unable to take but little nourishment, to wash the face, or to dress the hair. Patient had been receiving regularly during the past six or eight days, hypodermic injections of hyocin, morphin and cactin.



Fig. 4.—Showing a case of proliferative periodontitis at A.

Both sides of the face were involved, especially the auriculo-temporal of one side and the infra-orbital, supra-orbital and frontal regions of the other. On examination two teeth were isolated, a lower molar and an upper central incisor, as being the sole cause of the disturbance. Both teeth were removed at the first visit and when split open revealed numerous stones. The extraction, although painless locally, brought on a paroxysm which required another injection of the hypnotic to relieve it. The patient made a complete recovery in three or four days and had no recurrence of the trouble during the two years following.

CASE 3.—Mrs. I., aged 35, first consulted me Sept. 19, 1916, and incidentally complained of facial neural-

gia and asked what could be done for it. Patient was unable to give a definite location but, as she expressed it, the whole side hurt. However, the peripheral endings of the zygomatic nerves seemed to be the most sensitive to pressure. An upper molar proved to be hypersensitive to external stimuli, and on devitalization a large pulp stone was found. After its removal and the filling of the canals the pains disappeared and did not occur again during the following twelve months.

In conclusion, if the dental and medical professions would recognize these factors more often, many serious cases would be prevented. Here as well as elsewhere prevention is the most logical procedure for Gasserian dissection, nerve stretchings and alcoholic injections are unquestionably serious undertakings, and too often are of no benefit to the sufferer. The failure of the operation is probably more often from improper technic than from being illogical, but granting that the operation is a success, we have only treated the results and have not removed the cause. It is true, removal of the cause may not give relief in cases of long standing, so early diagnosis is essential for 100 per cent efficiency.

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AVOIDED SUBJECTS *

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It is undeniable that there are matters pertaining to the sexual organs and their abuse which deserve to be discussed and made plain to youths and some adults. It is also true that it is the duty of physicians under some circumstances to volunteer information to such as need it, and to impress parents with the importance of the subject, to the end that they may by timely and early instruction save their children from errors. Unfortunately there are many in our profession who pooh-pooh these matters. The writer was one of these until personal observation forced conversion.

Thus initiated into the subject I have in a desultory manner pursued the study, becoming all the while more and more convinced of its importance.

Unfortunately in the few days since I promised to read a paper before this meeting I have not had time to make such investigation as would be required for a proper discussion of this subject; hence the most that I can hope for on this occasion is to stress its importance.

In the investigation of patients suspected of masturbation, sexual excesses, and abuses of like character, the first essential is to win the patient over to the belief that the physician is sincerely interested in his or her welfare. This

requires tact, patience and honesty of purpose. Having gained the patient's confidence we can say: "I have treated you for some time, but, as both of us know, without success. Perhaps my investigation has not been thorough; possibly we have not been sufficiently frank with each other. For your good, will you permit me to inquire about a matter, a delicate one, which is frequently the cause of ill health? Whatever you may say will be held in the strictest confidence." Not one of those to whom I have thus spoken has been offended. Rather, if guilty, they have become penitent, communicative, and told the whole experience.

Mothers cannot be used as go-betweens because of their lack of tact, and because most daughters are very unwilling the mother should know of their errors. However, it is proper to secure their approval before mentioning such matters to young girls, but always with the understanding that the mother must not expect to be informed of the result, because a promise of absolute and strict secrecy is a prerequisite to a confession.

Besides being tactless, mothers are so timid and delicate in their manner of discussing such things that they too frequently fail to make themselves understood. This is shown by the following case:

A mother consulted me about her 16-year-old daughter, who accompanied her to my office. I suspected masturbation and so informed the mother, but she insisted that such could not be the case, because, as she said, she had warned her daughter when only about 12. Thus passed the matter with some further treatment by me and several other physicians. When about 22 she returned to me unaccompanied by her mother. Because of her increased age and even worse health than at previous consultations, I ventured to mention the matter to her. With confusion and embarrassment she declined to reply, except to say that she might do so on her next visit, and at the same time she requested me to say nothing about it to her mother. When she returned, in tears, grief and embarrassment, she confessed, telling how she had done so since childhood first with her finger and later with the handle of a pattern tracer. She was so penitent that she proposed to show it to me and did the next visit. This handle was of wood, with a bulbous extremity and smoothly painted. Her own statement as to the frequency left no doubt as to the cause of her ill health.

She gave a negative answer to my inquiry whether or not her mother had warned her of the evil habit, but later corrected it by saying that long before her mother had said something, but because of her nice way of expressing it she failed to make herself understood and that now for the first time she comprehended.

In early life parents ought to teach children the sin of illegal intercourse. Also they should early teach them the prevalence and horribleness of venereal diseases and of their obstinate resistance to treatment.

Unfortunately, too, many boys have been deluded by the oft-repeated untruth, "gonorrhoea is no worse than a bad cold." Likewise the exaggerated claims made for salvarsan have made some less cautious of venereal risks.

* Read at the Sixteenth Annual Meeting of the Frisco System Medical Association, Springfield, May 28, 29, 1917.

Every marriageable woman ought to know that "once gonorrhœa, always gonorrhœa" is too true, and that the man whom she loves, trusts and marries may infect her although he may have been symptomless for years. She should know, too, that her offspring may be syphilitic or blind by reason of gonorrhœa.

Too frequently physicians know of the marriage of young men who only recently had had gonorrhœa, and who had been duly warned against marriage. It is a pity that there is not a law to severely punish such persons. There should be laws to prohibit the issuing of licenses to anyone without a health certificate, definitely stating that the applicant has been found absolutely free of syphilis and gonorrhœa. This would go further than all else toward abolishing prostitution, because men would fear being barred from matrimony. These matters and those for the correction of the divorce evil ought to be under the supervision of the federal government.

I am here reminded of the case of a young wife who before marriage was very jolly and vivacious, but who not long after marriage underwent a great change. She seemed to have lost interest in everything. No more was she seen in company, on the streets, or elsewhere outside of her own home. She had become a recluse. Under these conditions she consulted me. Failing to find cause for her ill health I commented on her seclusion and advised her to go out more and to again engage in the affairs of the town as before. To this she replied that there was too much to overcome. I observed that she was struggling against embarrassment to tell me something. A little tactful assistance brought out the following sad experience: She said that before marriage she had experienced strong sexual desires and that after her engagement she had looked forward to great pleasures, but that alas all was disappointment. With a little more help she told how with each intercourse she was more and more disappointed because each time her passion became more and more obtunded until finally obliterated, and even worse, until the mere suggestion of the act became disgusting and revolting. All this, she said, was because her husband finished just as she was about to experience the orgasm. It is interesting to note here that not long before marriage her husband had applied to me for treatment for premature ejaculation caused, he said, by gonorrhœa and sexual abuses. Thus we see, as is too often the case, that a good wife has to pay the penalty for her husband's misdeeds.

What is our duty when husbands come to us for treatment of venereal diseases? By all means advise them to go straightway and make an honest confession and to abstain. By any other plan it is probable that the wife will become both *wise* and infected, which would make his predicament even worse and that of

his wife incomparably so, to say nothing of the unrest of his conscience, if he have one.

The evils and sequelæ of masturbation and of sexual excesses in early wedlock do not cease with reformation. On the other hand, they continue throughout life by reason of the changes they bring about in health, disposition, temperament, and capacity for sincere devotion without which marital happiness is impossible. This was forcibly illustrated in the case of a wife of about 30, the mother of three children, who inquired of me whether or not she could talk about something out of the ordinary without losing my respect. Observing her hesitancy, I suggested that she have her husband do it. To this she objected saying that what she wanted to say must never reach him.

Her story was about as follows: In early girlhood she had experienced the sexual sense very strongly, so strongly that at times she had been uneasy for her own safety. Later she observed that it was fast departing, she believed as a result of masturbation. Finally, before marriage she had ceased to experience the least desire, even for the man she loved and expected to marry. The day before marriage her mother requested a private talk with her in which she told her daughter of her own experience, how her married life had been sad and unhappy, and how she wanted to help her daughter escape such experience. She said that she had never experienced any sexual pleasure, and that she had early made the mistake of telling her husband. After awhile she had occasion to complain of his having improper relations with others. He defended himself on the ground that he had lost all desire for her because of her indifference and passiveness during the sexual act. So she admonished her daughter to pursue a different course, that is, if unfortunate like her mother, never to let her husband know it, but to pretend enjoyment. She concluded by saying that no one who had not had to act thus for thirteen years could imagine how hard and wearing it had been. She said everything which even suggested sexual matters was revolting to her, and stressed the fact that it was not so much the sexual disappointment as it was the falsehood which she had been continually living that hurt her most. Here we have a forceful example of the lack of early training but of wise advice to the bride.

Contrary to popular belief, masturbation is probably more prevalent among females than males. This is attributable to two circumstances. Once a boy experiences the orgasm and coitus in the natural way he more or less loses his desire for the unnatural. Girls and unmarried women by reason of their greater virtue, surroundings, and fear of pregnancy continue the habit. Is it not probable that many of the proverbial peculiarities and whims of maiden ladies are correctly attributable to this fact?

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EDITORIALS

ANALYSIS OF MISSOURI'S CONTRIBUTION OF PHYSICIANS TO THE WAR

Missouri's standing among the states is not as high as it should be in furnishing physicians for military service in this time of the country's great need. We are about thirty-third in the list.

The Surgeon-General has called upon each state to furnish 20 per cent. of the number of physicians in the state, and Missouri is about 9 per cent. below the mark.

Merely offering your services to the Surgeon-General "when you are needed" is not sufficient. The Surgeon-General must know how many men he has under his command so he can assign each one to the principal duty that his qualifications best fit him to perform. Sufficient time to arrange private affairs will be given each officer before being ordered to active duty.

In order that the profession of Missouri may know what percentage each county in the state has contributed to the service and the number of physicians that each county is expected to contribute, we append a table giving that information. It will be noted that sixteen counties have filled, or more than filled, their quota, namely, Barton, Bates, Dade, Daviess, Dekalb, Dunklin, Iron, McDonald, Maries, Mississippi, Platte, Pulaski, Shelby, St. Charles, St. Francois and Texas.

County	Population	Per Physician.	Square Miles	Per Physician.	Number of Physicians.	Quota (20 Cent).	Per (Cent).	Commiss. Recommen- dations	to Jan. 5, 1918.
Adair	810	20.39			28				
Andrew	899	25.17			17	6		2	
Atchison	756	29.33			18	3		0	
Audrain	657	20.77			33	4		0	
Barry	955	31.36			25	5		1	
Barton	985	35.05			17	3		3	
Bates	663	22.30			39	8		8	
Benton	783	39.21			19	4		2	
Bollinger	1,215	50.75			12	2		1	
Boone	555	12.50			55	11		7	
Buchanan	514	2.25			181	36		19	
Butler	879	30.39			23	5		4	
Caldwell	443	13.12			33	7		4	
Callaway	659	21.84			37	7		5	
Camden	891	52.85			13	3		0	
Cape Girardeau	628	13.18			44	9		4	
Carroll	722	21.96			32	6		2	
Carter	917	84.33			6	1		0	
Cass	621	19.48			37	7		5	

Cedar	804	24.90			20	4		0	
Chariton	1,022	33.39			23	5		1	
Christian	931	32.53			17	3		1	
Clark	674	26.21			19	4		2	
Clay	461	9.13			44	9		1	
Clinton	588	16.27			26	5		1	
Cole	813	14.40			27	6		2	
Cooper	781	21.46			26	5		1	
Crawford	1,044	57.46			13	3		2	
Dade	918	29.47			17	3		4	
Dallas	1,013	41.76			13	3		0	
Daviess	926	29.68			19	4		4	
Dekalb	783	26.56			16	3		3	
Dent	1,324	74.60			10	2		0	
Douglas	2,380	114.76			7	1		0	
Dunklin	739	12.93			41	8		9	
Franklin	877	25.85			34	7		6	
Gasconade	642	25.70			20	4		0	
Gentry	701	20.41			24	5		1	
Greene	570	5.95			112	22		16	
Grundy	598	15.46			28	6		2	
Harrison	640	22.53			32	6		0	
Henry	556	15.18			49	10		1	
Hickory	795	37.00			11	2		0	
Holt	559	17.15			26	5		0	
Howard	580	17.33			27	5		1	
Howell	780	33.88			27	5		0	
Iron	714	46.08			12	2		2	
Jackson	305	655			931	186		134	
Jasper	735	5.20			122	24		10	
Jefferson	1,212	29.61			23	5		2	
Johnson	692	21.86			38	8		5	
Knox	591	24.47			21	4		1	
Laclede	914	39.63			19	4		0	
Lafayette	670	13.60			45	9		3	
Lawrence	886	20.30			30	6		3	
Lewis	554	18.00			28	6		5	
Lincoln	532	18.97			32	6		5	
Linn	601	14.90			42	8		5	
Livingston	748	20.42			26	5		1	
McDonald	1,041	40.54			13	3		3	
Macon	718	18.81			43	9		6	
Madison	867	38.38			13	3		1	
Maries	1,687	86.66			6	1		3	
Marion	611	8.72			50	10		5	
Mercer	881	32.36			14	3		2	
Miller	1,045	37.06			16	3		2	
Mississippi	693	28.24			21	4		4	
Moniteau	846	24.11			17	3		2	
Monroe	1,017	37.00			18	4		2	
Montgomery	624	20.56			25	5		3	
Morgan	919	43.85			14	3		2	
New Madrid	886	29.64			22	4		3	
Newton	1,179	27.04			23	5		3	
Nodaway	554	16.75			52	10		1	
Oregon	1,335	70.73			11	2		1	
Osage	793	32.94			18	4		1	
Ozark	1,491	74.12			8	2		0	
Pemiscott	1,151	26.82			17	3		1	
Perry	993	30.80			15	3		2	
Pettis	771	15.56			44	9		6	
Phelps	1,128	47.85			14	3		2	
Pike	705	20.41			32	6		5	
Platte	721	20.75			20	4		5	
Polk	674	20.03			32	6		2	
Pulaski	715	33.87			16	3		3	
Putnam	842	30.41			17	3		1	
Ralls	861	32.06			15	3		1	
Randolph	595	11.16			44	9		3	
Ray	763	20.18			28	6		1	
Reynolds	796	69.00			12	2		1	
Ripley	1,091	52.33			12	2		1	
Saline	517	13.23			57	11		0	
Schuyler	566	19.31			16	3		0	
Scotland	848	31.36			14	3		2	
Scott	559	10.48			40	8		4	
Shannon	1,430	124.00			8	1		0	
Shelby	595	20.36			25	5		7	
St. Charles	914	19.81			27	6		12	
St. Clair	821	35.30			20	4		2	
St. Francois	1,088	13.88			33	7		9	
Ste. Genevieve	1,060	48.10			10	2		2	
St. Louis	1,268	7.49			65	13		12	
St. Louis (City)	393	0349			1,746	349		303	
Stoddard	732	21.45			38	8		7	
Stone	1,284	56.67			9	2		1	
Sullivan	886	30.90			21	4		1	
Taney	761	54.58			12	2		0	
Texas	1,192	64.39			18	4		4	
Vernon	824	23.97			35	7		1	
Warren	912	41.00			10	2		0	
Washington	1,115	61.75			12	2		0	
Wayne	799	40.79			19	4		2	
Webster	1,241	41.78			14	3		1	
Worth	616	20.38			13	3		1	
Wright	1,077	39.82			17	3		2	

REPORTING OF ACCIDENTS FROM LOCAL ANESTHETICS

Under the above caption will be found a communication to *THE JOURNAL** from the Therapeutic Research Committee of the American Medical Association requesting physicians to report, in medical journals or direct to the committee, all accidents arising from the administration of local anesthetics. The communication states the reasons for the request fully and explicitly, so there is no need for us to do more in these columns than to direct the attention of our members to the letter. We sincerely trust that all members will read the letter carefully and cooperate to the fullest extent with the research committee in their effort to collect data on this important subject.

INCREASE OF RANK FOR ARMY MEDICAL CORPS AND MEDICAL RESERVE CORPS

The agitation for the Congress to raise the rank of officers in the Army Medical Corps and the Medical Reserve Corps was renewed with the opening of the present session and should be continued until this recommendation has been granted. Senator Owen introduced a bill in the Senate to accomplish this end, and Representative Dyer of St. Louis recently introduced a similar measure in the House of Representatives.

We need not repeat the arguments in favor of this movement further than to say that the health and lives of the soldiers may be uselessly sacrificed by failing to give medical men in the army sufficiently high rank to enable them to order necessary corrections in hygienic and sanitary conditions without possibility of their orders being overruled by higher officers of the line who know nothing whatever about the dangers to health and life that are involved.

We urge our members to write to their senators and representatives and request them to support these measures. Prompt action should be taken by individual members and by the county societies.

WOMEN PHYSICIANS IN THE WAR

We have had several communications from women physicians asking whether they are not available for war service. We are informed by the Surgeon-General of the Army and by the Red Cross that many women physicians have offered their services and places have been found for quite a number of them. In the Red Cross the largest medical activity up to date consists of the infant welfare work in France,

in which some thirty physicians are taking part, about one-half of them being women. Their status is practically identical in every respect with that of the men except that the directorship and supervision of this work are in the hands of the men and were originally placed at the head of the work. The Red Cross has on file the applications of many women physicians and invites all women physicians possessing ability and training to make application for service. Their names will be added to the list and when opportunity presents itself to make use of their services the Red Cross will be glad to do so.

The Surgeon-General informs us that there is at present no place in the military establishment in which the services of women physicians can be utilized to advantage, but the Department has arranged to file all applications from women physicians in such a way that they will come to the attention of the authorities in case it becomes necessary to make use of the services of women physicians.

Applications for service in the American Red Cross should be directed to The American Red Cross, Washington, D. C. Applications for service in the Army should be directed to the Surgeon-General, U. S. Army, Washington, D. C.

There is another organization in which medical women may be of service, and that is American Women's Hospitals, which is organized by the war service committee of the American Women's National Association. This body has many avenues of usefulness for women physicians and can be of much service to any woman physician desiring to give her services to the country in this crucial period. Communications on this subject should be addressed to Dr. Eliza M. Mosher, 184 Joralemon Street Brooklyn, N. Y.

FORTY PER CENT. MEDICAL STAFF IN THE WAR

Almost 40 per cent. of the total staff of the medical school of Washington University has been released for national military medical service, and still others will leave from time to time. On another page* we publish a list of those who have accepted commissions, nearly all of whom are now in active service. In addition to this contribution of man power to the service of the country, the staff of the medical school has taken on important duties connected with the military departments of the government, among these being the officers' school in oral, plastic and neurological surgery, and of instruction in venereal diseases, dermatology and genito-urinary surgery. These schools are conducted under the direction of the Surgeon-General of the Army.

* See page 61.

* See page 63.

BEWARE OF SWINDLERS

No doubt members have seen the several notices, under "General News" in *The Journal of the American Medical Association* in several recent issues, entitled "Once More a Warning." These refer to swindlers operating in different sections of the country—various letters having been received from victims in Ohio, Colorado and other widely separated states. Now comes a letter from the well-known publishing house of W. B. Saunders Co. of Philadelphia, saying a man under the name of E. T. Rogers, claiming to represent the University Progressive Club of Cincinnati, for medical and other journals, has been victimizing physicians in Illinois; and the same subscription swindlers, or another under the name of Robert Wayne, has been relieving physicians of their well earned cash in the region of Gary, Ind. It is believed there is concerted action, perhaps by an organized band, to victimize physicians on so-called "subscription" schemes. Every physician should decline to pay any money by check, or otherwise, to subscription agents not personally known to him, or for whom other physicians cannot vouch. Many of these so-called agents operate under the guise of students "working their way through college."

ANONYMOUS COMMUNICATIONS

Within a period of thirty days we have received two anonymous communications which probably were written by the same individual, although the handwriting on the envelope is disguised. The subject matter contained in each envelope is identical, and is of very great importance to the welfare of the organization. Had the individual sent this matter to us with an inquiry and affixed his signature we would have then been in position to take intelligent action.

We think the great majority of members are fully cognizant of the fact that communications which are marked confidential are so regarded by the officials of the Association, and when such communications entail an investigation by the officers the result of that investigation can then be reported to the individual who brought the matter to our attention. We therefore request that members do not send us anonymous communications.

NO SALOONS IN NEVADA

The effort on the part of Nevada, Mo., to secure a government training camp for that city is made more forceful by the fact that the City of Nevada and Vernon County are "dry." In

addition to all the other advantages Nevada possesses, this fact constitutes a most compelling reason for locating the camp at Nevada.

This information came to us after we had published the editorial in our January issue favoring the location of a camp at Nevada, in which we gave out the impression that Nevada had licensed saloons. It gives us much pleasure to make this correction and repeat that the city of Nevada would make an ideal point for the location of a government training camp.

NEW AND NONOFFICIAL REMEDIES

Under this caption we publish new articles that have been accepted by the Council on Pharmacy and Chemistry. We suggest that members write the advertisers for more complete information concerning the articles—not forgetting to state that your attention has been called to the article by this item in *YOUR JOURNAL*. The following articles have been approved since our last issue and have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Calco Chemical Company: Chloramine-B (Calco); Chloramine-T (Calco); Dichloramine-T (Calco); Halazone (Calco).

Dermatological Research Laboratories, Philadelphia Polyclinic: Arsenobenzol (Dermatological Research Laboratories), 0.4 gm. ampules.

Farbwerke-Hoechst Co.: Novocaine.

A. Klipstein and Co.: Sterile Solution Coagulen-Ciba (3 per cent.) 1.5 c.c. ampules; Sterile Solution Coagulen-Ciba (3 per cent.) 20 c.c. ampules; Tablets Coagulen-Ciba, 0.5 gm.

NEWS NOTES

LIEUTENANTS M. H. TOPPING of Flat River, and ROY E. MYERS of Newtonia, have been honorably discharged from the Medical Reserve Corps on account of being physically disqualified for service.

DR. J. L. EATON, superintendent of State Hospital No. 4, Farmington, has inaugurated a tree-planting movement which he proposes to make an annual custom at the institution. Hard maple and other varieties were planted as directed by the landscape gardner. This movement will add beauty and benefit to the already highly attractive surroundings of this modern state hospital.

A MEDAL for "notable service to mankind" has been presented to Dr. Wm. J. Mayo by the National Institute on Social Science at its meeting in New York, January 18. Similar medals were also presented to Herbert C. Hoover, food administrator, and Henry P. Davidson, chairman American Red Cross.

AN error: In the proceedings of the Gasconade-Maries-Osage County Medical Society published in our December issue, it was stated that a joint meeting with Cole and Franklin County medical societies would be held at Hermann on the last Thursday in April, 1916. Of course it should have been 1918. We offer our apologies to the members of these societies for this unexcusable error.

DR. R. EMMET KANE of St. Louis has been selected by the National Council of the Knights of Columbus as one of the speakers to deliver addresses to the soldiers on Washington's birthday. The government has requested the Knights of Columbus to furnish speakers for the thirty-five camps to deliver addresses on the general topic "The Life and Times of George Washington." Dr. Kane will speak to the soldiers at Camp McClellan, Anniston, Ala.

THE president of our Association, Capt. Robert E. Schlueter of St. Louis has been ordered to Fort Oglethorpe, Ga., for active service. In view of the fact that the first three vice-presidents are holding commissions in the service and that two of them are now on active duty, Dr. Schlueter has appointed Dr. W. A. Clark of Jefferson City to act as president, and Dr. Clark has accepted this responsibility.

DR. PHILIP A. SHAFER, dean of Washington University Medical School, has been selected by the Surgeon-General to take charge of a branch of the food division which has recently been established as a part of the sanitary corps of the Army, and Major J. R. Murlin, assistant professor of physiology, Cornell University, has been appointed director of the division. Under their direction, the food supply of the troops will be investigated, not only as to its nutritional value, but as to its sanitary condition and its palatability. The division will also inquire into the efficiency of the cooks, mess sergeants and others detailed to handle the food for the army. Dr. Shaffer has been commissioned a Major and will soon go to France where he will have charge of the work of this division for our armies.

MEMBERSHIP CHANGES, JANUARY

NEW MEMBERS

Nathan C. Acree, Myrtle.
 Benj. S. Anspach, Gifford.
 I. N. Barnett, Poplar Bluff.
 A. C. Cautrell, Thayer.
 Joseph M. Davis, Thomasville.
 James Franklin Gullic, Koshkonong.
 George O. Hammersley, Campbell.
 Wm. George Hogan, Neck.
 Otto B. Ilch, St. Charles.
 Austin Jones, Shackelford.
 Harvey Wilson Maloney, Thayer.
 James C. McKay, Kennett.
 George A. Moore, Humphreys.
 Philip L. Patrick, Marcelline.
 Wm. Parsons, Greencastle.
 Calvin Rhea, Thayer.
 Thos. C. Richards, Fayette.
 O. H. Ridings, Meadville.
 A. H. Ringen, Sweet Springs.
 Myron M. Russell, Chillicothe.
 Allen G. Scott, Cardwell.
 Columbus C. Sheets, Van Buren.
 S. P. Simmons, Marshall.
 Andrew D. Steele, St. Charles.
 John D. Tunnell, Reger.
 Melvin J. Williams, Pollock.

CHANGE OF ADDRESSES

Clay Allen, Blairstown to St. Louis.
 L. M. Asbury, Marcelline to Dalton.
 E. H. Bullock, St. Joseph to Kansas City.
 C. W. Burdett, Ava to Cardwell.
 P. P. Burton, Lowndes to Greenville.
 John A. Chilton, Van Buren to Ellington.
 George W. Duncan, Ulman to Iberia.
 H. W. Harris, Winchester, R. D., to Canton.
 J. J. O'Keefe, 3221 Lucas to 1211 N. Grand, St. Louis.
 R. F. Knowles, Brunswick to Belle River, Ill.
 C. T. Leach, Feuersville to Bland.
 C. P. Megee, Fayette to Hartsburg.
 S. W. Morgan, Cape Girardeau to Shawnee-town.
 C. H. Pease, Wyatt to Morehouse.
 J. T. Redwine, Davis, W. Va., to McKendree, W. Va.
 Harry W. Squibb, Halfway to Quapaw, Okla.

REINSTATED

J. E. Bankhead, Clarksville.
 John A. Malley, Monroe City.
 D. M. Pearson, Louisiana.

RESIGNED

A. E. Derwent, Clinton.
 E. F. Higdon, St. Joseph.

DROPPED

Wm. L. Chaffin, Breckenridge.
 W. A. Beckemeyer, Sedalia.
 George B. Cowley, Cowgill.
 Lee J. Eads, Hamilton.
 W. F. Logan, Sedalia.

DECEASED

R. C. Atkinson, St. Louis.

CORRESPONDENCE

**REPORTING OF ACCIDENTS FROM
 LOCAL ANESTHETICS**

To the Editor:—The Committee on Therapeutic Research of the Council on Pharmacy and Chemistry of the American Medical Association has undertaken a study of the accidents following the clinical use of local anesthetics, especially those following ordinary therapeutic doses. It is hoped that this study may lead to a better understanding of the cause of such accidents and consequently to methods of avoiding them, or at least of treating them successfully when they occur.

It is becoming apparent that several of the local anesthetics, if not all of those in general use, are prone to cause death or symptoms of severe poisoning in a small percentage of those cases in which the dose used has been hitherto considered quite safe.

The infrequent occurrence of these accidents and their production by relatively small doses point to a peculiar hypersensitiveness on the part of those in whom the accidents occur. The data necessary for a study of these accidents are at present wholly insufficient, especially since the symptoms described in most of the cases are quite different from those commonly observed in animals even after the administration of toxic but not fatal doses.

Such accidents are seldom reported in detail in the medical literature, partly because physicians and dentists fear that they may be held to blame should they report them, partly perhaps because they have failed to appreciate the importance of the matter from the standpoint of the protection of the public.

It is evident that a broader view should prevail and that physicians should be informed regarding the conditions under which such accidents occur in order that they may be avoided. It is also evident that the best protection against such unjust accusations and the best means of preventing such accidents consist in the publication of careful detailed records when they have occurred, with the attending circumstances. These should be reported in the medical or

dental journals when possible; but when, for any reason, this seems undesirable, a confidential report may be filed with Dr. R. A. Hatcher, 414 East Twenty-Sixth Street, New York City, who has been appointed by the Committee to collect this information.

If desired, such reports will be considered strictly confidential so far as the name of the patient and that of the medical attendant are concerned, and such information will be used solely as a means of studying the problem of toxicity of this class of agents, unless permission is given to use the name.

All available facts, both public and private, should be included in these reports, but the following data are especially to be desired in those cases in which more detailed reports cannot be made:

The age, sex and general history of the patient should be given in as great detail as possible. The state of the nervous system appears to be of especial importance. The dosage employed should be stated as accurately as possible; also the concentration of the solution employed, the site of the injection (whether intramuscular, perineural or strictly subcutaneous), and whether applied to the mouth, nose or other part of the body. The possibility of an injection having been made into a small vein during intramuscular injection or into the gums should be considered. In such cases the action begins almost at once, that is, within a few seconds.

The previous condition of the heart and respiration should be reported if possible, and of course the effects of the drug on the heart and respiration, as well as the duration of the symptoms, should be recorded. If antidotes are employed their nature and dosage should be stated, together with the character and time of appearance of the effects induced by the antidotes. It is important to state whether antidotes were administered orally, or by subcutaneous, intramuscular or intravenous injection, and the concentration in which such antidotes were used.

While such detailed information together with any other available data are desirable it is not to be understood that the inability to supply such details should prevent the publication of reports of poisoning, however meager the data, so long as accuracy is observed.

The committee urges on all anesthetists, surgeons, physicians and dentists the making of such reports as a public duty; it asks that they read this appeal with especial attention of the character of observations desired.

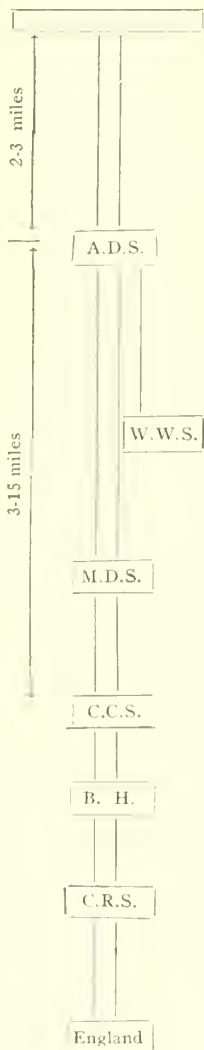
TORALD SOLLMANN, Chairman,
 R. A. HATCHER, Special Referee,

Therapeutic Research Committee of the
 Council on Pharmacy and Chemistry
 of the American Medical Association.

EXCERPTS FROM LETTER FROM
 LIEUT. WM. J. MIEHE, M. R. C.,
 TO DR. PERCY NEWMAN

Somewhere in France,
 Dec. 2, 1917.

At present our field ambulance is in the line and now I have come to the conclusion that General Sherman didn't know a thing about war. It is worse than Hell. Three days I was living and doing my work in the famous Hindenburg line, that is, in one of the Bosche dug-outs. But yesterday we moved our dressing station and now we are under canvas and doing fairly well. Schmitz is in this outfit, and at present he is a "Stretcher Bearer Officer." I will endeavor to give you an idea of how the wounded men are taken care of.



Section of front line (trench) usually held by a regiment. When a man is wounded, his pal or neighbor puts on the first aid dressing here. Regimental doctor sees all cases and gives advice to regimental stretcher bearers.

Advance Dressing Station, where wounds are dressed (mostly stretcher cases). There are two medical men here and a staff of about twenty corporals and sergeants doing dressings.

Walking Wounded Station, where the walking wounded are taken care of, such as redressing, hot drinks, cakes, biscuits and cigarettes.

Main Dressing Station, where the men receive clean, dry clothes, hot food, etc. Splints reapplied, minor operations, etc.

Casualty Clearing Station, where wounded are operated upon.

Base Hospital, where cases are reoperated. Also slight cases held that might get back to their units in a few weeks.

Corps Rest Station, where cases are held any length of time that might get them back to their units without going to England.

England, where most of the severe cases are taken and cases requiring long attention, such as gas cases, paraplegia and hemiplegia, compound fractures, amputations, blind, fractured skulls, etc.

From the trenches the wounded are taken or carried to the A. D. S. or W. W. S., then by motor ambulance to the M. D. S., and so on by train, canal-boat or machines. All the good surgery is, of course, done at the C. C. S., so you see most of the Base Hospital surgery consists of reamputations, opening pus pockets, etc. I was giving anesthetics for ten days at a C. C. S., and know that the surgeons there don't want to go to the base and operate.

For the past few days we have been mighty busy, working twenty-four hour shifts. Dr. Schmitz is "up the line" and I am in charge of the W. W. S., we being seniors (in commission) to the two other Americans attached to the Field Ambulance.

If you will look up the old newspapers of November 28 to December 1, you will read about the famous Hindenburg line. Well, that's the locality of France we are in now.

Previous to coming here and while I was at a C. C. S., the Ambulance was at the Flanders district (Belgium), but suddenly one night we got orders to come down here. So the entire outfit was put on a train, motor ambulances, horses, wagons, men and officers, and the next morning we were down here and started for the front that night. I must say the travel on the train this one night was altogether different than the nights when I left Havre and Rouen coming to Bethune, as we had warm food prepared in a box-car, whisky, tea and coffee. Ten days ago I had a chance to visit Ypres, and must say this town is in a terrible condition and absolutely beyond repair. Just now the shells are whistling through the air and the noise of the guns is terrible. Many of the wounded men I have seen from the artillery are absolutely deaf. Last night we had a wounded German prisoner (artillery) through our station, so you can imagine the "push" that is being made. I spoke German to him and he told me that he had had nothing to eat for three days except hard tack, a little coffee and water. The poor fellow was almost exhausted from hunger and not from his wound. He says that food is terribly scarce and that butter costs \$5 a pound (20 marks). He also said that the entire division (brought from Russia) could scarcely get anything to eat because the British gunfire destroyed all the roads and railroads, and transportation of food for the men was almost impossible, except what they could carry.

Sincerely,

WM. J. MIEHE,

100 Field Ambulance B. E. F., France.

NAVY'S CALL FOR BINOCULARS, SPY-GLASSES AND TELE- SCOPES

"THE EYES OF THE NAVY"

WASHINGTON, D. C., Jan. 14, 1918.

To the Editor:—The Navy is still in urgent need of binoculars, spy-glasses and telescopes. The use of the submarine has so changed naval warfare that more "EYES" are needed on every ship in order that a constant and efficient lookout may be maintained. Sextants and chronometers are also urgently required.

Heretofore, the United States has been obliged to rely almost entirely upon foreign countries for its supply of such articles. These channels of supply are now closed, and as no stock is on hand in this country to meet the present emergency it has become necessary to appeal to the patriotism of private owners to furnish "EYES FOR THE NAVY."

Several weeks ago an appeal was made through the daily press resulting in the receipt of over 3,000 glasses of various kinds, the great majority of which has proven satisfactory for naval use. *This number, however, is wholly insufficient, and the Navy needs many thousands more.*

May I, therefore, ask your cooperation with the Navy to impress upon your subscribers, editorially, pictorially or in display, by announcing, in addition to the above general statement, the following salient features in connection with the Navy's call:

All articles should be securely tagged giving the name and address of the donor, and forwarded by mail or express to the Honorable Franklin D. Roosevelt, Assistant Secretary of the Navy, care of Naval Observatory, Washington, D. C., so that they may be acknowledged by him.

Articles not suitable for naval use will be returned to the sender. Those accepted will be keyed, so that the name and address of the donor will be permanently recorded at the Navy Department, and every effort will be made to return them, with added historic interest, at the termination of the war. It is, of course, impossible to guarantee them against damage or loss.

As the Government cannot, under the law, accept services or material without making some payment therefor, one dollar will be paid for each article accepted, which sum will constitute the rental price, or, in the event of loss, the purchase price of such article.

Toward the end of January it is proposed to distribute throughout the country posters making an appeal to fill this want of the Navy.

As this is a matter which depends entirely for its success upon publicity, I very much hope that you will feel inclined to help the Navy at this time by assisting in any way that lies within your power.

Very sincerely yours,

(Signed) FRANKLIN D. ROOSEVELT,
Assistant Secretary of the Navy.

DR. J. R. BRUCE ACCEPTS COMMISSION

MARSHFIELD, Mo., Jan. 24, 1918.

To the Editor:—In looking over the lists for those who have been examined and received commissions in the Medical Reserve Corps, I have failed to find my name as yet. I beg to say that I was examined last May and received my commission. I have been ordered to report for service at Fort Riley, Kansas, to which place I go on February 3.

Yours truly,

(Signed) J. R. BRUCE.

MISCELLANY

MISSOURI PHYSICIANS EXAMINED FOR COMMISSIONS IN MEDICAL RESERVE CORPS

We publish below the names of physicians who have applied for membership in the Medical Officers' Reserve Corps since the last list was published in our January number. We will appreciate information from any members who discover errors in these lists. We know the list is not complete because we have been unable to obtain the names of physicians examined by some of the examining boards but we are doing the best we can to give prominence and honor to the physicians of Missouri who are responding to the call of the country in the present crisis. Not all the physicians named in these lists have been commissioned as some have been rejected for physical disability and for other reasons. We believe, however, it is proper and right that we publish the names of all who apply whenever we can obtain the correct information. We cannot give the present addresses but we are making an effort to send THE JOURNAL to those who enter the service as soon as we learn their location and will change the address of THE JOURNAL as often as the officer is moved from one station to another. The list follows:

Alee, G. D. Lamar
Blakemore, Jos. M., St. Louis
Brown, G. S., Edina
Bullard, Oscar R., St. Louis
Burke, J. P., California
Dyer, Clyde P., St. Louis
Eudy, W. T., Koller
Gallagher, E. E., St. Louis
Gasser, Herbert S., St. Louis
Hughes, Harry S., St. Louis
Ingham, Paul Gregory, St. Louis
Jackson, B., St. Charles
Jones, Tucker J., St. Louis
Kusmo, Peter M., St. Louis
Langan, Wm. Jos., Jr., St. Louis

Martin, Clarence, St. Louis
Meyers, H. A., Sedalia
Miller, H. M., St. Louis
Noll, Edwin A., St. Louis
Parker, W. C., West Em-
nence
Printy, L. E., St. Louis
Ranson, John Roy, St. Louis
Richards, T. C., Fayette
Sneed, C. M., Columbia
Stepp, Abraham L., Vanduser
Weintraub, Sol A., St. Louis
White, T. Wistar, St. Louis
Williams, Jas. E., St. Louis
Wright, D. P., St. Louis

MISSOURI STATE BOARD OF HEALTH

The annual January meeting of the Missouri State Board of Health was held in their offices in the capitol on Jan. 8, 1918.

The following officers were elected for the present year: president, Dr. W. J. Ferguson of Sedalia (reelected); vice president, Dr. W. A. Clark of Jefferson City; secretary, Dr. George H. Jones of Jefferson City (reelected). Other members of the board of health are: Dr. Marc Ray Hughes, St. Louis; Dr. T. A. Son, Bonne Terre; Dr. T. W. Cotton, Van Buren; Dr. T. H. Wilcoxon, Bowling Green.

The annual report on the conduction of the board of health and the bureau of vital statistics for the past year indicates that the work of this department is in keeping with the general trend of the present progressive administration.

Through the initiative of this department there is at present under way an organization of the local authorities in the city of Joplin and Jasper County for a public health campaign in an attempt to eliminate the communicable diseases which are at present unusually prevalent in Jasper County. When the organization is completed the proposition will be presented to the Surgeon-General of the United States Public Health Service, from whom it is hoped that material assistance may be obtained for conducting the campaign.

With the cooperation of the local authorities the state board of health proposes to vaccinate free of charge any person in Jasper County against both smallpox and typhoid fever. These are preventable diseases and vaccination is urgently advised not only to citizens of Jasper County but to every citizen of the state.

The action of the national and state councils of defense in an effort to control and to eliminate social diseases and tuberculosis is strongly endorsed and all possible assistance will be rendered.

The grades made at the written examination held in St. Louis on December 17, 18, 19, 1917, and applications for reciprocity were passed on and the following thirty-nine physicians will receive state licenses to practice medicine and surgery in Missouri:

BY EXAMINATION

Name	Home Address
Blanchard, Irene M.	Webster Groves, Mo.
Bracy, James Madison	Boston
Briscoe, Charles E.	Kansas City, Mo.
Bullard, Oscar Richard	St. Louis
Cohen, Frank	New York
Glover, Clark S.	Russellville, Mo.
Fuentes, Osear Jose	Chicago
Howard, Richard Hy., Jr.	Chicago
Jaracz, Walter John	St. Louis
Jones, Omer H.	Vichy, Mo.
Jones, Ralph E.	Vichy, Mo.
Jones, Tucker Jerome	St. Louis
Owen, Samuel Hy. Clay, Jr.	Kansas City, Mo.
Phillips, Irvin	Buffalo, Mo.
Quick, John Doward	Kansas City, Mo.
Ranson, John Roy	St. Louis
Reilly, William Stanley	St. Louis
Stubblefield, James Preston	St. Louis
Swinehart, Bertram O.	St. Louis
Titsworth, Guy	Sedalia, Mo.
Weir, Loren Ray	Lathrop, Mo.
Wiggins, Elmore Cornelius	St. Louis
Williams, John Alphonso	Chicago

BY RECIPROCITY

Beyer, Louie John	Kansas
Caldwell, W. W.	Kansas
Chapman, Thomas E.	Virginia
Dargatz, Fred E.	Nebraska
Durant, William J.	Iowa
Lynott, William A.	Pennsylvania
Halstead, Frank R.	Iowa
McMurray, Eugene R.	Indiana
McNorton, Augustine O.	Tennessee
McWaters, W. J.	Kentucky
Odell, Steven L.	Tennessee
O'Malley, William F.	Maryland
Rinehart, Jacob S.	Indiana
Schwein, Bertha O.	Kansas
Shull, William I. H.	Kansas
Williams, James Bart	Kentucky

MEMBERS OF FACULTY AND CLINICAL STAFF OF MEDICAL SCHOOL, WASHINGTON UNIVERSITY

Commissioned in Military Service (Army or Navy) and in Active Service

LIST I

Abbott, F. B.	Lieut. M. R. C. (Assistant Resident Surgeon, Barnes Hospital)
Allison, Nathaniel	Capt. M. R. C. (Associate Professor of Clinical Orthopedic Surgery)
Arbuckle, M. F.	Lieut. M. R. C. (Assistant in Clinical Laryngology and Rhinology)
Bell, H. H.	Lieut. M. R. C. (Instructor in Pathology)
Blair, V. P.	Major, M. R. C. (Associate in Clinical Surgery)
Bredeck, J. F.	Lieut. M. R. C. (Resident Physician, Medical Service, Barnes Hospital)
Brown, J. A.	Lieut. D. R. C. (Dentist, Barnes Hospital)
Burns, S. S.	Lieut. M. R. C. (Otological Clinic, Washington Univ. Dispensary)
Campbell, O. H.	Major, M. R. C. (Assistant in Clinical Medicine)
Chesney, A. M.	Lieut. M. R. C. (Associate in Medicine)
Clopton, M. B.	Major, M. R. C. (Associate in Clinical Surgery)
Cole, Herman R.	Lieut. M. R. C. (House Officer, Medical Service, Barnes Hospital)
Crossen, H. S.	Capt. M. R. C. (Associate in Clinical Gynecology)
Eberbach, C. W.	Lieut. M. R. C. (House Officer, Medical Service, Barnes Hospital)
Eyerman, C. H.	Capt. M. R. C. (Assistant in Clinical Medicine)
Fischel, Walter	Major, M. R. C. (Assistant in Clinical Medicine)
Fisher, R. F.	Lieut. M. R. C. (Surgical Clinic, Washington University Dispensary)
Frank, A. M.	Lieut. M. R. C. (Medical Clinic, Washington University Dispensary)
Fuson, L. H.	Lieut. M. R. C. (Medical Clinic, Washington University Dispensary)
Gilbert, A. A.	Lieut. M. R. C. (Medical Clinic, Washington University Dispensary)
Green, P. P.	Lieut. M. R. C. (Research Fellow in Surgery)
Griot, G. A.	Lieut. M. R. C. (Laryngological Clinic, Washington University Dispensary)
Heithaus, A. S.	Lieut. M. R. C. (Dermatological Clinic, Washington University Dispensary)

- Johnston, M. R. Capt. M. R. C. (Assistant in Pediatrics)
 Judy, John A. Lieut. Naval M. R. (Assistant Resident, Obstetric Service, Barnes Hospital)
 Kelley, I. D. Capt. M. R. C. (Otolological Clinic, Washington University Dispensary)
 Larimore, Joseph W. Lieut. M. R. C. (Assistant in Clinical Medicine)
 Lehman, E. P. Lieut. M. R. C. (Assistant in Surgery)
 Luten, D. W. Lieut. Naval M. R. (Assistant in Medicine)
 Lyman, H. W. Lieut. M. R. C. (Instructor in Clinical Otology)
 McCormack, N. DuB. Lieut. M. R. C. (Assistant Resident Physician, St. Louis Children's Hospital)
 McCulloch, Hugh. Capt. M. R. C. (Instructor in Pediatrics)
 Mook, W. H. Capt. M. R. C. (Instructor in Clinical Dermatology)
 Murphy, F. T. Major M. R. C. (Professor of Surgery)
 Murphy, J. H. Lieut. M. R. C. (Resident Physician, St. Louis Children's Hospital)
 Olmsted, W. H. Lieut. M. R. C. (Assistant in Medicine)
 Opie, E. L. Capt. M. R. C. (Professor of Pathology)
 Payne, R. J. Lieut. M. R. C. (Laryngological Clinic, Washington University Dispensary)
 Post, M. H. Lieut. M. R. C. (Ophthalmological Clinic, Washington University Dispensary)
 Post, L. T. Capt. M. R. C. (Ophthalmological Clinic, Washington University Dispensary)
 Proetz, A. W. Lieut. M. R. C. (Otolological Clinic, Washington University Dispensary)
 Rainey, W. R. Capt. M. R. C. (Orthopedic Surgical Clinic, Washington University Dispensary)
 Sale, Llewellyn. Major, M. R. C. (Instructor in Clinical Medicine)
 Schwab, S. I. Capt. M. R. C. (Associate in Clinical Neurology)
 Shaffer, Phillip A. Major Sanitary Corps (Dean)
 Spivy, R. M. Capt. M. R. C. (Obstetrics and Gynecology, Unit 1 [Washington University Unit], St. Louis City Hospital)
 Stewart, J. E. Lieut. M. R. C. (Orthopedic Surgical Clinic, Washington University Dispensary)
 Stimson, Philip M. Lieut. M. R. C. (Assistant Resident Physician, St. Louis Children's Hospital)
 Veeder, B. S. Capt. M. R. C. (Associate Professor of Clinical Pediatrics)
 Weihrauch, H. V. Lieut. M. R. C. (Assistant Resident Physician, Barnes Hospital)
 Wilson, F. N. Lieut. M. R. C. (Instructor in Medicine)
 Young, H. McClure, Lieut. M. R. C. (Assistant in Clinical Surgery)

LIST II

MEMBERS OF CLASS OF 1917 AND OTHER STUDENTS NOW IN ACTIVE MILITARY SERVICE

- | | |
|-----------------------|--------------------|
| Alvis, H. A. | McKee, J. W. |
| Ball, B. C. | Mitchell, W. L. |
| *Brown, John Clarence | *Mueller, Robert |
| *Burchfiel, C. M. | Muench, Hugo, Jr. |
| Cargile, L. C. | Noble, T. B. |
| *Callaway, G. D. | O'Keefe, C. D. |
| Costen, J. B. | Padgett, E. C. |
| Fardy, M. J. | Polk, G. M. |
| Gay, L. P. | *Sheley, Nelson W. |
| Lohr, O. W. | *Wallace, F. B. |
| Lueking, H. F. | Withers, Sanford |
| *McArthur, Guy B. | |

*Indicates graduates of 1917. Others are medical students.

LIST III

MEMBERS OF WASHINGTON UNIVERSITY TRAINING SCHOOL WHO ARE ON FOREIGN SERVICE

- | | |
|-------------------------|------------------------|
| Stimson, Miss Julia C. | Jark, Miss Martha |
| Claiborne, Miss Estelle | Reed, Miss Ola M. |
| Cobb, Miss Ruth | Russell, Miss Florence |
| Hill, Miss Mabel | Watkins, Miss Rachel |
| Keith, Miss Byrd | |

LIST IV

MEMBERS OF FACULTY AND CLINICAL STAFF OF MEDICAL SCHOOL

Commissioned, but Not in Active Service

- Burrows, M. T., Lieut. M. R. C. (Associate Professor of Pathology)
 Dorris, R. P., Lieut. M. R. C. (House Officer, Surgical Service, Barnes Hosp.)
 Lonsway, M. J., Lieut. M. R. C. (Resident Physician, St. Louis Children's Hosp.)
 O'Donnell, H. St. C., Lieut. M. R. C. (House Officer, Medical Service, Barnes Hosp.)
 Peacock, K. C., Lieut. M. R. C. (House Officer, Medical Service, Barnes Hosp.)
 Tormey, A. R., Lieut., M. R. C. (House Officer, Medical Service, Barnes Hosp.)

Commission Applied For

- Bechtold, Edmund (Assistant Resident, Surgical Service, Barnes Hosp.)
 Rose, D. K. (Assistant Resident, Surgical Service, Barnes Hosp.)
 Sevin, Omar (Resident Surgeon, Barnes Hosp.)

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.
 Carter-Shannon County Medical Society, Jan. 9, 1918.
 Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.
 St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.
 Henry County Medical Society, Jan. 24, 1918.

ST. LOUIS MEDICAL SOCIETY

Meeting of Dec. 1, 1917

The meeting was called to order at 8:45 p. m., Dr. Albert H. Hamel presiding.

The minutes of November 24 were read and approved.

The scientific program consisted of the following: Dr. George Gellhorn read a paper entitled, "The Dangers of Operating on Syphilitics."

Discussion by Drs. Francis Reder, Carroll Smith, R. B. H. Gradwohl and Norvelle Wallace Sharpe; Dr. Gellhorn closing.

Dr. John R. Caulk read a paper entitled, "Remarks on Kidney Surgery Based on a Study of One Hundred Consecutive Cases."

Discussion by Drs. William Robertson, Alonzo R. Kieffer and W. C. G. Kirchner; Dr. Caulk closing.

Dr. McMahon, acting as spokesman for the junior interns, stated their position and the steps they had taken to obtain a remuneration of \$25.00 a month.

Dr. Shutt and Director of Public Welfare John C. Schmoll explained their attitude in the matter.

Dr. Hinchey moved that the medical society approve and support the bill presented by the interns. Seconded.

Discussion by Dr. R. P. Scholz.

Dr. Hamel relinquished the chair to Dr. A. R. Kieffer and addressed the society on the matter. He offered an amendment to Dr. Hinchey's motion to the effect that the St. Louis Medical Society support the interns in their efforts to secure remuneration, but that the amount be left to the discretion of the hospital authorities. Seconded.

Dr. Schisler moved that a vote of appreciation be extended to the director of public welfare and the hospital commissioner for their efforts in behalf of the interns. Carried.

Dr. Schisler moved that the society go into executive session. Carried.

Dr. Hamel's motion was put and carried unanimously.

Dr. Hinchey's motion was put and carried.

Attendance 202.

Meeting of December 8, 1917

The meeting convened at 8:45 p. m., Dr. Albert H. Hamel presiding.

The minutes of the previous meeting were read, corrected and approved.

Dr. Seabold called attention to the irregularity of our procedure in permitting a resolution which was an amendment to the By-Laws governing the Bulletin to be entertained and adopted by the Society at the meeting of December 1. The resolution directed that all editorials must be signed.

The scientific program consisted of a Clinical Evening.

Dr. Louis H. Behrens presented a case of mitral valve leak in an individual who had been taking digitalis in small doses three times daily for three years.

Discussion by Drs. E. J. Schisler, Jerome E. Cook, Joseph Grindon and William T. Coughlin; Dr. Behrens closing.

Dr. Hudson Talbott presented the following specimens: (a) Acephalic Fetus. (b) Two Specimens Gallstones in Extirpated Gallbladders with Case Reports. (c) Uterine Fibroid with Case Report.

Discussion by Drs. William T. Coughlin and Charles W. Sherwin; Dr. Talbott closing.

Dr. Jerome E. Cook presented a specimen of shaggy heart with case report.

Discussion by Drs. E. J. Schisler, Louis H. Behrens and William T. Coughlin; Dr. Cook closing.

Dr. Baldwin, chairman of the Health and Public Instruction Committee, reported that the bill providing for filling vacancies in the Medical Corps of the United States Army by officers of the Medical Officers' Reserve Corps, had been introduced into the House of Representatives and referred to the Committee on Military Affairs. He moved that the consideration of the Richter Bill, making it a misdemeanor for any one to accept free service at the City

Dispensary who is able to pay for it, be made a special order of business immediately following the first paper on Saturday, December 15. Carried.

Dr. Seabold moved that the House Committee be instructed to furnish a Service Flag. Carried.

The secretary moved a committee of three—a surgeon, a laboratory man, and a syphilographer—be appointed to study the relationship of syphilis to surgery and tabulate their findings.

The secretary read a letter from John D. McLean, secretary of the General Medical Board of the Council of National Defense, thanking the Society for its prompt response to the appeal made by President Wilson for a systematic physical examination of the registrants for the army. The secretary was instructed to acknowledge receipt of this letter.

Dr. William T. Coughlin moved that a committee be appointed to investigate the cost of equipment of medical officers to ascertain if the charges are excessive. Carried.

The chair appointed Drs. William T. Coughlin, chairman, Charles S. Rehfeldt and J. Albert Seabold to serve on this committee.

Attendance 38.

Meeting of December 15, 1917

The meeting was called to order at 9 p. m., by the president, Dr. Albert H. Hamel.

The reading of the minutes was postponed to the next meeting.

Dr. Edward Richter presented his proposed bill making it a misdemeanor for any one to accept free service at the City Dispensary who is able to pay for it.

Discussion by Drs. Frederick A. Baldwin, Helmuth H. Kramolowsky, Charles W. Sherwin, R. B. H. Gradwohl, E. Lee Myers and Nathan Barlow.

Dr. Koetter moved that the St. Louis Medical Society endorse the proposed Richter Bill. Carried.

Dr. Rudolph S. Vitt, coroner, read a paper entitled, "Some Important Things the Medical Profession Should Know About the Coroner's Office."

Discussion by Drs. Frederick W. Abeken, Edward H. Kessler, Charles A. Stone, Quitman Newell, R. B. H. Gradwohl and Albert H. Hamel; Dr. Vitt closing.

It was moved that the card furnished by the coroner be published in the Bulletin. Carried.

In the absence of Mr. Festus J. Wade, Hon. Charles M. Hay addressed the society on "Government Thrift Stamps and War Savings Certificates."

Dr. R. Emmet Kane moved that a rising vote of appreciation and thanks be extended to Mr. Hay. Carried.

Drs. Albert F. Koetter and R. Emmet Kane submitted the following amendment to the By-Laws:

Amend Section 5, Chapter 10, by eliminating first paragraph in its entirety and substituting therefor the following:

The Bartscher Fund Committee acting with the officers of a trust company to be selected by the Council at its first meeting in January shall consider methods for depositing, investing and administering the fund and shall advise the Council on these matters. The trust company selected by the Council shall attend to the routine business of administering the fund.

By eliminating the words "at an annual meeting" and substituting therefor the words "At the first meeting in February of each year" so that the paragraph as amended shall read:

This by-law shall not be suspended, amended nor altered excepting at the first meeting in February of each year and then by a four-fifths affirmative vote.

Attendance 65.

Meeting of December 22, 1917

The meeting was called to order at 8:45 p. m., Dr. Albert H. Hamel presiding.

The minutes of the meetings of December 8 and 15 were read and approved.

The scientific program consisted of a paper entitled, "Disadvantages of the Upright Posture" by Dr. A. G. Pohlmann.

Discussion by Drs. Alonzo R. Kieffer and Frank Hinchev; Dr. Pohlmann closing.

Major P. A. Shaffer, Dean of the Medical Department of Washington University, introduced the guest of the evening, Dean Carroll Davis, who delivered a message from Hospital Unit No. 21 now serving in France.

Dr. Elsworth Smith moved a standing vote of thanks be extended to Dean Davis for his splendid address. Carried.

Dr. Louis C. Boisliniere moved that the secretary be instructed to cable the society's congratulations to Unit No. 21 for the splendid work being done by them and to express the society's earnest solicitation for their future success. Carried.

Attendance 215.

J. ALBERT SEABOLD, M.D., Secretary.

PROCEEDINGS OF THE WASHINGTON
UNIVERSITY MEDICAL SOCIETY

Forty-Fifth Meeting, Monday, Nov. 12, 1917

1. EXHIBITION OF CASES.

A CASE OF OXYCEPHALY.—By DR. SACHS.

(Presented at the Forty-Fourth Meeting)

This patient, complaining of headaches and prominence of his eyes, entered the hospital a year and a half ago. He vomited occasionally.

Examination showed partial involvement of the eighth and seventh nerves on the left side. No other localizing symptoms.

The roentgen ray showed a thin skull with moderate convolitional atrophy. Double choked disk of moderate degree. There was no unusual deformity of the head.

The diagnosis made at the time was an unlocalizable brain tumor. The patient contracted diphtheria shortly after entering the hospital and was taken home because he was a diphtheria carrier. He returned in June, 1917, still complaining of headaches, eyes more prominent than before, so that the exophthalmos was quite striking, and a marked prominence at the site of the anterior fontanelle. The choked disk was still present. The temporal fossae over each zygoma were also very prominent.

Roentgen ray showed an extraordinary amount of convolitional atrophy with extremely thin skull.

Bilateral decompression was done, a week elapsing between the two operations. The patient is now in school, is without headaches and shows marked improvement. Both herniae bulging. At the time of operation, the intracranial pressure was very high.

The object of decompression in these cases is to prevent the inevitable blindness that accompanies cases of oxycephaly.

A. SPINAL CORD TUMOR.—By J. W. BERGSTROM.

Mrs. H., white, female, aged 35 years. Admitted into hospital Oct. 21, 1917. Complaint: numbness of legs and dragging of feet. Family history and past history unimportant. Present illness dates back to April, 1914. There was an ascending numbness in the left leg, accompanied by partial paralysis. Complete paralysis of leg developed three months later.

Condition improved for a time, but in November, 1916, complete paralysis again developed in left leg. In January, 1917, right leg became involved. There were tingling sensations and pain at night. Paralysis began in March, 1917, and rapidly progressed. During the past three years patient has had difficulty in starting her urine and also impaired control of anal sphincter.

Important findings in the physical examination are: 1. Spasticity of both legs; bilateral patella clonus; ankle clonus; Babinski, and increased knee kicks. 2. Diminished sensibility to light touch over whole body below axillae, also over median aspect of both arms above wrist; anesthesia to pin prick over median side of both arms and left half of body below axilla; hypalgesia below axilla over right chest and abdomen; inability to differentiate heat and cold over left half of body below axilla and over median aspect of both arms above wrists. 3. Roentgen ray, negative.

Laminectomy performed Oct. 31, 1917, and small fibroid tumor was removed from left side of posterior aspect of cord, under fourth cervical vertebra. Reflexes were markedly diminished after patient came out of anesthesia.

November 2, patient was able to move right leg and foot, also toes of left foot. November 11, power of right foot practically normal; reflexes normal except for Babinski; left leg has little power of flexion at hip; power in foot good; definite patellar and slight ankle clonus. Sensory examination shows an area of anesthesia to pin prick and inability to differentiate heat and cold over right leg and right side of body below axilla in front and lower dorsal vertebra behind. In front this area extends a short distance beyond midline to left. November 12, patient walked a short distance with assistance. November 13, patient took a few steps unassisted.

DISCUSSION

DR. SACHS: I asked Mr. Bergstrom to show this patient for two reasons. In the first place, because of the very rapid restoration of function of the cord after such long compression. She had had compression for three years and in less than fourteen days, function of the extremity is practically normal. Her legs were stiff before the operation. She could not move them voluntarily at all. She has recovered, showing that though there has been such long compression, there was no destruction to her cord.

Another point that is of interest is the relation of the position of the tumor to the sensory findings. The sensory findings correspond to the eighth dorsal spinal segment and the tumor was four vertebrae higher. The tumor always lies higher than the sensory symptoms would indicate, due to the overlapping of the sensory fibers. Another thing is the very mild disturbance in function of the spine due to a laminectomy. She can move her head in spite of the fact that the backs of four vertebrae have been removed.

I am inclined to believe this tumor is benign.

B. A CASE OF FOCAL SYPHILITIC LESIONS OF THE CORD.—By DR. SACHS.

I am presenting this patient for but one purpose, namely, to show the paralysis of half the rectus muscle, which may be of great value as a diagnostic localizing sign. When the patient raises his head from the table, the umbilicus moves up for about one inch instead of remaining in the same position.

This sign has been recognized before, but not much attention has been paid to it. It indicates very definitely a lesion of the eighth dorsal spinal segment.

2. OBSERVATIONS ON SURGICAL SHOCK (Continued).

INTRAVENOUS GLUCOSE INJECTIONS IN SHOCK.—By DR. JOSEPH ERLANGER and DR. R. T. WOODYATT.

Glucose injected intravenously at rates varying between 0.57 and 4.0 gm. per kilogram per hour for from twenty to sixty minutes into anesthetized dogs reduced to a state of "shock" (by partial temporary occlusions of the inferior cava or aorta) has been observed uniformly to increase the mean arterial pressure. The increase has been greater than that produced by 0.9 per cent. sodium chlorid injections at the same rate. The injections have uniformly produced an increase in the pulse amplitude, often quite marked, indicating a condition of plethora. The increase in pulse amplitude has usually been more striking than the increase in arterial pressure. A subtolerant dose has raised the arterial pressure and increased the pulse amplitude as effectively as many of the injections made at more rapid rates. With the more rapid injections, a marked hemorrhagic tendency may develop in animals in this condition. No other palpable deleterious effects were observed.

In one case the increase in pressure determined by the injection of glucose continued after the cessation of the injection until the pressure was approximating the normal. Such a recovery of the arterial pressure has never occurred spontaneously in shock produced by partial occlusion of the vena cava.

On theoretical and experimental grounds supported by some clinical evidence, it would appear that intravenous injections of glucose at appropriate rates are of distinct benefit in certain cases of shock.

DISCUSSION

DR. SHAFFER: I shall have to confess that I know nothing about shock, but it is a great pleasure to recall the experience that I had this summer in being able to watch Dr. Erlanger and Dr. Woodyatt in some of these experiments. There are one or two points from a theoretical point of view that seem to be of considerable interest. I would like to ask Dr. Erlanger if he has any direct information of the effect on the blood volume on the injection of the glucose solution.

In explanation of that question, it does not seem perfectly clear that Dr. Woodyatt's explanation of this effect is altogether satisfactory. He says, during reading papers, that his point of view is that the injection of 0.7 or 0.8 gm. of glucose maintains a hyperglycemia, resulting in the holding of water in the blood vessels, abstraction of water from the tissue into the blood vessels, so that the blood volume is increased. An extensive amount of glucose injected into the circulation rapidly leaves the circulation, as Dr. Woodyatt has found, and goes into tissue. Dr. Woodyatt assumes when it passes through the blood vessels, it has not power to hold water as before. He supposes, perhaps, that it is either utilized or polymerized. There is no evidence as far as I know, that anything like all of it is utilized, because if you calculate the caloric value of 0.7 gm. per kilo hour, it amounts to three times the production of the animal. There is no indication that it has been polymerized.

With that explanation of my question, I would like to ask Dr. Erlanger about the increase in blood volume.

DR. ERLANGER: In regard to Dr. Shaffer's question, I may say that Dr. Woodyatt came here convinced that injections of glucose at this rate would increase the blood volume. His views were not, however, based on direct observation, and we have made no direct observations ourselves. The increase in pulse

amplitude as shown in the records, in the absence of any change in pulse rate, clearly indicates that the blood volume is increased. I can think of no other explanation of this increase in pulse amplitude, other possibly than some effect glucose may have on heart muscle. And it is scarcely conceivable that such an effect could be so marked.

In regard to the question of Dr. Brooks,* we do not mean to maintain that diminished blood supply is the only cause of shock. Rather we believe it can be brought on by anything that will interfere with the nutrition of the tissues for any length of time. In order to get shock by the methods we have employed, it is necessary to partially clamp off at least the posterior half of the body, and it must be clamped for at least two hours. Indeed in our experience, we have found it necessary to partially occlude the vessels for even longer periods of time. I have no doubt but that closing off the leg circulation for two hours will produce very extensive damage. Closing off the aorta for two hours produces tremendous damage. I should say, therefore, that cases in which a large part of the body has been deprived of its circulation for some time, stand a better chance of going into shock than cases in which circulation has not been temporarily closed off.

Replying to Dr. Sach's question, sugar, injected parenaturally, is utilized. But just how completely and in how large amounts I cannot say. Perhaps Dr. Shaffer could answer Dr. Sach's question more definitely than I can.

3. A NOTE ON THE MECHANISM OF FAT METABOLISM.—By DR. MONTROSE T. BURROWS (Department of Pathology, Washington University Medical School).

It had already been noted that a large number of the cells which migrate or grow out into the medium (plasma) of a tissue culture contain numerous fat droplets within their cytoplasm. Nerve fibers rarely contain these droplets and actively growing connective tissue cells may be free of them. Leukocytic, lymphocytic, connective tissue, and epithelial cells which do not grow actively in the culture contain invariably large numbers of fat droplets.

It has been shown further that the amount of fat in the cells varies with the amount in the medium and inversely with those conditions which tend to lower the metabolism of the cells. If fat free medium is used the cells do not contain fat. The presence of fat in the cells need not have any effect on the metabolic activity of the cell and further there is no evidence to show that the droplets are utilized by the cells during their activity. Connective tissue cells have been observed to grow and divide for a long time, the sum of the fat droplets in the progeny being equal at the end of this time to that in the mother cells. Heart muscles after several days of active contraction have the same number of droplets as at the beginning. Fat may decrease in a cell but in those instances where observed fat droplets to account for the decrease in the cell have been seen, to form in the medium outside.

Connective tissue cells growing in thin layers of medium rich in fat very frequently remain free from fat, while those growing in thick layers become filled with droplets. The question arose as to what causes this change.

Large droplets of fat have been found to be repelled from actively growing cells. A further careful study has shown that the plasma about the growing cells becomes free of the small droplets which are suspended in the fibrin. The large droplets are driven

* See discussion of paper on Surgical Shock in Proceedings forty-fourth meeting.

to the edge of the layer of medium. The small ones, on the other hand, disappear and do not tend to accumulate in a mass beyond the edge of the growing cells. When the cells invade the whole layer they disappear entirely.

These observations have led to the belief that the fat is not changed in the cell but in the medium without. In the culture it is transformed in the plasma into a substance which does not stain with Sudan III. This reaction is a reaction between the plasma and the fat catalyzed by substances liberated by the metabolizing cells. In cultures of most tissues fatty acids have not been found to be a product of this change.

The observations become of interest in that they show why fat is not taken up by actively metabolizing cells and it is hoped that they may be of importance in directing the way to a better understanding of the actual chemical changes that these substances undergo in the organism.

ADAIR COUNTY MEDICAL SOCIETY

At the October meeting of the Adair County Medical Society, after the disposal of the routine business, Dr. Callison read an interesting paper on the "Therapeutic Value of Serums and Vaccines," which was thoroughly discussed by all members present. A circular letter from the Surgeon-General was read inquiring relative to the success in life of people who were partially disabled from injuries or chronic disease.

At the December meeting the following were elected to office for the year 1918: president, E. C. Callison, Kirksville; vice president, H. M. Humphreys, Brashear; secretary-treasurer, J. W. Martin, Kirksville; delegate to state association meeting, J. S. Gashwiler, Novinger.

Dr. B. S. Anspach of Gifford was elected to membership.

All members having paid their dues for 1918, our society again takes a place on the honor roll.

J. W. MARTIN, M.D., Secretary.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session Thursday afternoon, Dec. 27, 1917, in the court room at Butler. The meeting was called to order at 2 p. m. by the president, Dr. J. H. Fletcher. The minutes of the last meeting were read and approved. The treasurer's report was read and approved.

Since so many doctors have enlisted in the Army and in order that we may Hooverize a little, it was moved by Dr. T. F. Lockwood and seconded by Dr. T. W. Foster, that the society meet every three months during 1918 instead of monthly. Motion carried.

The election of officers for 1918 was in order. It was moved and seconded that Dr. S. L. Bates be elected president. Motion carried. Dr. T. C. Boulware was nominated for vice president and elected by acclamation. Dr. J. S. Newlon was nominated for secretary and elected by acclamation. Dr. H. A. Rhodes was nominated as delegate and elected by acclamation with Dr. T. W. Foster as alternate. Dr. S. L. Bates appointed on the board of censors the following: Drs. G. G. Lane, T. F. Lockwood and J. H. Fletcher.

Dr. J. M. Smith of Amoret was present and was reinstated as a member.

The committee appointed at the November meeting to adopt a fee schedule was unprepared to report, but a schedule was outlined and adopted as a permanent fee basis.

The next meeting will be held at Butler, March 28, unless sooner convened by order.

J. S. NEWLON, M.D., Secretary.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, Jan. 2, 1918, with twenty-eight members present; the president, Dr. Floyd Spencer, in the chair. The minutes of the previous meeting were read and approved.

The secretary and treasurer's reports were read and the latter referred to the Executive Committee for their approval. After the various special committees had been called on for their reports and discharged, Dr. Daniel Morton, the incoming president, was introduced and delivered his address, outlining a program and policy for the year 1918, subject, of course, to its adoption by the society.

The following standing committees for the year 1918 were announced: Executive, J. J. Bansbach, J. M. Doyle, W. M. Minton; Public Health and Legislation, Floyd Spencer, J. F. Owens, W. C. Proud; Program, H. S. Conrad, A. B. McGlothlan, G. R. Stevenson; Library, C. R. Woodson, John Wisser, B. W. Tadlock; Medical Service, Daniel Morton, 1918; L. J. Dandurant, 1918-1919; W. M. Minton, 1918-1920; Membership, Louis Bauman, Fred Ladd, W. W. Gray; Tuberculosis, Horace Carle, Porter Williams, Charles Geiger; Laboratory, Clarence Good, Paul Forgrave, Caryl Potter, P. I. Leonard, A. L. Gray, E. B. Kessler, G. A. Lau.

A motion was made by Dr. Bansbach, seconded by Dr. Lau, that the Program Committee be authorized to dispose of the old projectoscope and secure an adequate stereopticon outfit for the society. Carried.

A motion was made by Dr. Spencer, seconded by Dr. Bansbach, that the society pay the county and state dues of all members entering the military service of the United States and assigned to active duty. Carried.

A motion made by Dr. Lau, seconded by Dr. Ladd, that the Library Committee request the public library to secure such books as a medical officer may need, and place them on the shelf for the service of the society. Carried.

A motion was made by Dr. Owens, seconded by Dr. Lau, that this society go on record favoring the issue of good road bonds.

Meeting of Jan. 16, 1918

The regular meeting of the Buchanan County Medical Society was held at St. Francois Hotel, Wednesday evening, Jan. 16, 1918. There were sixty-five members present, the president, Dr. Daniel Morton, in the chair. This being a social session with a dinner, the reading of the minutes was dispensed with.

The report of the committee in charge of securing new quarters was made by Dr. Bansbach and he announced that the assembly room in the Public Library building had been placed at the disposal of our Society for the purpose of holding our sessions and that there would be no charge for the use of the rooms. The question of accepting this offer was put to a vote and unanimously carried. The secretary was instructed to write the School Board thanking them for the offer.

The regular program of the evening consisted of a paper on "Cerebral Localization," by Dr. G. Wilse Robinson of Kansas City, which proved very interesting and was greatly enjoyed by the members present.

W. F. GOETZE, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met in Liberty, Monday evening, December 31, at which time election of officers and other business of the society was attended to.

The following officers were elected for 1918: president, Dr. W. N. Cuthbertson of Liberty; vice presi-

dent, Dr. J. W. Epler of Kearney; secretary-treasurer, Dr. J. J. Gaines of Excelsior Springs; censor for three years, Dr. W. H. Goodson of Liberty; delegate to state meeting, Dr. H. J. Clark of Excelsior Springs; alternate, Dr. F. H. Matthews of Liberty.

The Clay County Medical Society enters its sixty-fourth year with very pleasing prospects. The past year has been full of good things and the retiring president, Dr. H. J. Clark, has not missed a single meeting during his administration. Aside from having a chronic secretary, everything is distinctly acute in this society. No rust, mange, dry-rot, or laudable pus. Lookout for us.

J. J. GAINES, M.D., Secretary.

DAVISS COUNTY MEDICAL SOCIETY

A special war meeting of the Daviess County Medical Society was held at Gallatin Y. M. C. A., Thursday, Dec. 27, 1917.

Dr. Spence Redman, Platte City, councilor of the twelfth district, delivered a splendid address, pointing out the different ways in which the great medical profession could help win the war, and the doctors are determined to do their part in this the greatest conflict of all ages. Dr. Redman thinks there will be no need of drafting physicians, as Daviess County, along with other counties, has already given her quota of volunteers and there are others ready to go if they are needed.

The following officers were elected for 1918: president, J. D. Dunham, Pattonsburg; first vice president, M. A. Smith, Gallatin; second vice president, G. D. Harris, Jamesport; third vice president, T. N. Foster, Coffey; secretary-treasurer, N. M. Wetzel, Jameson; reporter, W. L. Brosius, Gallatin.

The following committees were appointed by the president: Program and Scientific Work, J. D. Dunham, W. L. Brosius and N. M. Wetzel; Board of Censors, T. N. Foster, G. D. Harris, A. G. Minnick; Public Health and Legislation, R. V. Thompson, G. M. Wooden, C. C. Coats; Tuberculosis, J. Z. Parker, L. R. Doolin, C. E. Griffith.

The meeting was well attended and the Daviess County physicians are much in earnest about their society and are already planning for some helpful meetings for the coming year.

N. M. WETZEL, M.D., Secretary.

MARION COUNTY MEDICAL SOCIETY

The regular meeting of the Marion County Medical Society was held Jan. 4, 1918, the president, Dr. Chilton, in the chair. Other doctors present were E. T. Hornback, J. N. Baskett, I. E. Hill, E. E. Waldo and Mary S. Ross.

Many interesting cases were discussed, especially scarlet fever cases.

MARY S. ROSS, M.D., Secretary.

PEMISCOT COUNTY MEDICAL SOCIETY

The Pemiscot County Medical Society met at Caruthersville in the Commercial Club Rooms, Tuesday, January 8, with the following physicians present: Drs. M. H. Hudgings, B. D. Crowe, W. A. Swearingen, J. B. Luten, M. B. Hendrix, L. B. Hall, W. S. Robertson and L. E. Cooper.

The applications for membership of Drs. L. B. Hall, J. R. Pinion and G. A. Grainger of Caruthersville, and Dr. A. B. Allstun of Steele were received and elected to membership.

The following officers were elected: M. B. Hendrix, president; W. S. Robinson, vice president; L. E. Cooper, secretary; W. A. Swearingen, treasurer; L. E. Cooper, delegate; L. B. Hall and H. T. Byers, censors.

The fees of J. W. Johnson and G. W. Phipps now in service were paid by the Society.

L. E. COOPER, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met in regular session at the commercial club rooms in Moberly, Jan. 2, 1918, at 8 p. m., with the president, Dr. Dutton, in the chair.

The minutes of the previous meeting were read and approved. Two members paid their dues for the current year. The following were present: Dr. R. A. Woods of Clark; Dr. Davis of Jacksonville; Drs. R. G. Epperly, S. C. Adams and D. A. Barnhart of Huntsville; Drs. L. A. Bazan, E. W. Shrader, C. B. Clapp, C. K. Dutton and F. L. McCormick, of Moberly. On motion Dr. Dutton was elected delegate to the Missouri State Medical Association and Dr. Barnhart alternate.

A paper was read on "Pneumonia, Its Complications and Treatment," by Dr. McCormick, and was freely discussed by all members present.

Dr. Shrader was appointed to read a paper on "Blood and Blood Pressure" at the next meeting. There being no further business, the society adjourned to meet at the commercial club rooms in Moberly at 8 p. m. on the first Wednesday in February, 1918.

F. L. McCORMICK, M.D., Secretary.

ST. CLAIR COUNTY MEDICAL SOCIETY

The St. Clair County Medical Society held its regular meeting on Jan. 2, 1918, at the office of Dr. Ruth Seevers, Osceola. There were present Drs. Ruth Seevers, William E. Bell, Wilburn Cline, C. A. Smith, R. J. Smith and E. C. Peelor.

After the reading and adoption of the minutes of the preceding meeting, Dr. C. A. Smith, the retiring president, made a farewell address in which he reviewed the work of the past year. Following his address the new president, Dr. Wilburn Cline of Appleton City, and Secretary E. C. Peelor of Lowry City were installed and made short addresses.

Dr. Ruth Seevers was appointed to fill the vacancy on the board of censors. Dr. Peelor was elected delegate to the annual meeting of the state association, and Dr. Dalglish alternate.

There was a lengthy discussion in regard to the resolutions concerning care of practice of members called to the colors, and the following resolution offered by Dr. Ruth Seevers was unanimously adopted:

Resolved, That this society does hereby pledge its loyalty to the government and to its members in this time of war, but that we refuse to indorse the resolutions as sent out by the state committee.

The next meeting will be held on March 6.

EDWIN C. PEELOR, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The meeting of the St. Louis County Medical Society was called to order at 3:30 p. m., Jan. 9, 1918, by President Reynolds. Present were: Drs. S. H. Reynolds, J. H. Sutter, R. B. Denny, R. D. Moore, Marshall Baker, William H. Townsend, Howard Carter, L. W. Cape and A. Conway. The minutes of the previous meeting were read and approved.

Dr. Cape reported two cases of German measles, calling attention to the presence of enlarged cervical glands in both cases, which authorities note as being a characteristic symptom.

Dr. Denny reported a case of obstetrics complicated by a fibrous tumor, in which delivery by podalic version was necessary, resulting in a protrusion of the intestines, probably due to uterine rupture. Death from shock occurred within six hours. No autopsy

having been allowed, the exact conditions could not be described.

Dr. Townsend reported the delivery of a monstrosity of enormous size.

Drs. Cape, Townsend, Carter and Baker reported various cases of dystocia which had occurred in their experiences. Dr. Baker reported a case of uremic poisoning in a little girl of eleven following scarlet fever.

Dr. Denny reported a case of fractured forearm under his care presenting unusual features and asked advice of members.

Dr. Carter announced that arrangements had been made with Dr. J. J. Singer of Washington University to read a paper at the next meeting on "Present-Day Conceptions of Tuberculosis Pulmonalis." with lantern slide demonstrations.

Dr. Carter read a short paper on "Tuberculosis Tests," which was followed by a general discussion and questions from members of the society.

It being reported that Drs. Armstrong and Berry are sick, the secretary was instructed, by motion duly made and carried, to write them letters of sympathy in the name of the society.

The president announced that under Section 4 of the by-laws of the society he was required to appoint a committee on public health and legislation, and in compliance therewith appointed the following: Drs. Carter, Townsend and Denny, to work in collaboration with our councilor, Dr. Cape.

ARTHUR CONWAY, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since the publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

BORCHERDT'S MALT SUGAR.—A mixture containing approximately maltose, 87.40 per cent.; dextrin, 4.35 per cent.; protein, 4.40 per cent.; ash, 1.90 per cent., and moisture, 1.95 per cent. It may be used when maltose is indicated in the feeding of infants, particularly in the treatment of constipation. The Borchardt Malt Extract Co., Chicago (*Jour. A. M. A.*, Dec. 1, 1917, p. 1875).

TYRAMINE-ROCHE.—A brand of tyramine hydrochloride complying with the standards of New and Nonofficial Remedies. The Hoffmann-LaRoche Chemical Works, New York (*Jour. A. M. A.*, Dec. 1, 1917, p. 1875).

ATOPHAN.—A proprietary brand of phenylcinchoninic acid complying with the standards of the U. S. P., but melting between 208 and 212 C. For a description of the actions, uses and dosage, see New and Nonofficial Remedies under Phenylcinchoninic Acid and Phenylcinchoninic Acid Derivatives. Atophan is sold in the form of pure atophan and as atophan tablets 0.5 Gm. Schering and Glatz, New York (*Jour. A. M. A.*, Dec. 8, 1917, p. 1971).

ARSPHENAMINE.—The Federal Trade Commission having adopted the name "arsphenamine" as the term to apply to 3-diamino-4-dihydroxy-1-arsenobenzene,

first introduced as salvarsan, the Council on Pharmacy and Chemistry voted to adopt this abbreviated name in place of arsenphenolamine hydrochloride now in New and Nonofficial Remedies.

ARSENOBENZOL (DERMATOLOGICAL RESEARCH LABORATORIES).—A brand of arsphenamine. It has essentially the same actions, uses and dosage as salvarsan. It is supplied in ampules containing, respectively, 0.4 Gm. and 0.6 Gm. Manufactured and sold by the Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia.

SALVARSAN.—A brand of arsphenamine. Supplied in 0.6 Gm. ampules. Manufactured and sold by Farbwerke-Hoechst Co., New York.

CHLORAMINE-T.—Sodium paratoluenesulphochloramide. It has the actions, uses, dosage and physical and chemical properties given in New and Nonofficial Remedies, 1917, for chlorazene.

CHLORAMINE-T (CALCO).—A brand of chloramine-T. Manufactured by the Calco Chemical Co., Bound Brook, N. J.

NOVOCAINE.—The monohydrochloride of paraaminobenzoyldiethylamino-ethanol. Actions, uses and dosage, see New and Nonofficial Remedies, 1917, p. 31. Manufactured by Farbwerke-Hoechst Co., New York (*Jour. A. M. A.*, Dec. 22, 1917, p. 2115).

PROPAGANDA FOR REFORM

SOME MISBRANDED MINERAL WATERS.—Shipments of the following bottled mineral waters were seized by the federal authorities, and on prosecution declared misbranded under the provisions of the U. S. Food and Drugs Act: (1) Baldwin Cayuga Mineral Water; (2) Bowden Lithia Water; (3) Carbonated Colfax Mineral Water; (4) Chippewa Natural Spring Water; (5) Crazy Mineral Water; (6) Crystal Lithium Springs Water; (7) Gray Mineral Water; (8) Henk Waukesha Mineral Spring Water; (9) Seawright Magnesian Lithia Water; (10) White Stone Lithia Water, and (11) Witter Springs Water. The "lithia" waters (Nos. 2, 6, 9 and 10) were in each case declared misbranded in that they did not contain sufficient lithium to warrant the term "lithia" in the name. A number (Nos. 1, 3, 5, 6 and 11) were declared adulterated in that they contained filthy or decomposed animal or vegetable substances of an excessive number of bacteria. Most of the waters (Nos. 1, 3, 4, 6, 7, 8, 9 and 10) were declared misbranded because the curative claims made for them were found unwarranted, false or fraudulent (*Jour. A. M. A.*, Dec. 1, 1917, p. 1901).

SALVARSAN MANUFACTURE AUTHORIZED IN U. S.—The Federal Trade Commission has granted orders for licenses to three firms to manufacture and sell arsphenamine, the product heretofore known under the trade name of salvarsan, patent right to which have been held by German subjects. Provided conditions of the license are accepted by the firms, the following will be authorized to make and sell arsphenamine: Dermatological Research Laboratories of Philadelphia; Takamine Laboratory, Inc., of New York, and Herman A. Metz Laboratory of New York. The license stipulates that the name arsphenamine be used in connection with the trade name, that the product must be submitted to the U. S. Public Health Service for examination before sale, and reserves the right to fix the price (*Jour. A. M. A.*, Dec. 8, 1917, p. 1989).

ANASARCIN AND ANEDEMINE.—These are the twin nostrums of cardiac pseudotherapy. Cardiac disease with its resultant renal involvement is frequently encountered; and running, as it does, a chronic course, it offers an almost ideal field of exploitation for the typical nostrum vender, who is more familiar with human credulity than with this preparation. Anedemine is said to consist of apocynum, strophanthus and squill with elder—an irrational mixture of three heart drugs with inert elder. Anasarcin has been stated to contain sourwood, elder and squill. Anasarcin is a dangerous remedy in the hands of the average clinician, and its use is at all times to be condemned. In view of the dangers attending the incautious use of any member of the digitalis group of drugs, it is impossible to condemn sufficiently the recommendation that the use of Anasarcin should be continued without cessation until all symptoms of dropsy have disappeared. In the present state of our knowledge of cardiac drugs, it is indisputable that digitalis and tincture of digitalis are best suited for the treatment of cardiac disease except in those few cases in which intramuscular or intravenous administration must be employed temporarily for immediate effect (*Jour. A. M. A.*, Dec. 8, 1917, p. 1992).

THE CARREL-DAKIN WOUND TREATMENT.—From observations of the results of the treatment of wounds by the Carrel method, William H. Welch is convinced that Carrel deserves credit for calling the attention of surgeons to the possibility of the sterilization of infected wounds by chemical means. The Carrel method actually accomplishes sterilization sufficiently for surgical purposes. The destruction of surface bacteria without injury to the body tissues is of primary importance (*Jour. A. M. A.*, Dec. 8, 1917, p. 1994).

STRANDGARD'S T. B. MEDICINE.—The resident physician of a Canadian sanatorium states that the Dr. Strandgard's Medicine Company of Toronto, Canada, is attempting to sell its "consumption cure" called Strandgard's T. B. Medicine to Canadian soldiers who are treated at the sanatorium (*Jour. A. M. A.*, Dec. 15, 1917, p. 2060).

PEPTO-MANGAN.—Physicians having served the purpose of popularizing it, Pepto-Mangan (Gude) is now advertised in newspapers. In consideration of the established facts in regard to the absorption of iron and its utilization, all possible excuse for the therapeutic employment of Pepto-Mangan, in place of iron, has vanished. False claims regarding the efficiency of the preparation have been circulated by its promoters, and about two years ago the Council on Pharmacy and Chemistry reported that while the statements were no longer made, they had never been definitely admitted to be erroneous by the Breitenbach Company, and that Pepto-Mangan was then being exploited to the public indirectly. From a reading of the present advertisement in a medical journal, one can only suppose that this was intended to mislead physicians. The physician who prescribes Pepto-Mangan as a hematinic shows ignorance of the most rudimentary facts of iron therapy, and the intelligent patient soon perceives his limitations. "Useful Drugs" contains a list of iron preparations that are suitable for all conditions that call for iron. William Hunter discusses the subject of anemia and its treatment at considerable length in "Index of Treatment," Edition 6, p. 17-37, and gives many prescriptions containing iron for use under different conditions (*Jour. A. M. A.*, Dec. 29, 1917, p. 2202).

BOOK REVIEWS

THE MEDICAL CLINICS OF NORTH AMERICA. Volume I, Number 3 (The New York Number, November, 1917). Octavo of 346 pages, 37 illustrations. Philadelphia and London: W. B. Saunders Company, Published Bimonthly. Price per year: Paper, \$10.00; Cloth, \$14.00.

This is the New York number and contains twenty-two contributions from the foremost physicians of that city from clinics conducted in fourteen of the principal hospitals. The leading article is from the clinic of Dr. Warfield T. Longcope at the Presbyterian Hospital on "Acute Tuberculosis; Polycythemia with Enlarged Spleen (Vaquez's Disease)."

PROBLEMS OF SUBNORMALITY. By J. E. Wallace Wallin, Director of the Psycho-Educational Clinic, Board of Education, St. Louis; with an introduction by John W. Withers, Ph.D., Superintendent of Public Schools in the City of St. Louis. Yonkers-on-Hudson, New York: World Book Company. 1917. Price, \$3.00.

This volume contains a historical review of the recognition of subnormal individuals and the care or absence of care accorded to them. This serves in reality as the introduction of the subject and is made the vehicle for an overstrained argument against the adequacy of the medically trained mind to cope with the question of feeble-mindedness. Abnormal mental conditions of whatever nature and in all their phases will always remain within the realm of medical interpretation. In other fields of activity the doctor is called to train and indicate training of abnormal minds. In the above subject this implies an increment to our storehouse of knowledge by educational studies and perhaps the final and complete acceptance of the Binet-Simon tests with their limitations.

By inference one would conclude from the perusal of the chapter on feeble-mindedness that the direct medical questions involved have been settled for all time and that these unfortunates should be abandoned to their fate, — the simple remedy of properly applied education.

The chapter on epilepsy is fallacious in its deductions and should not be considered a fair presentation of the matter. The author uses a rigid unit of measure in some details and a flexible one in others, as may suit his contention.

The author fails to state that the subject matter of this book is a common meeting ground of the doctor, in all that that name implies, and the educationist.

If the educationist can not interpret medical findings in a better light than has been exhibited in this book then there is no better argument for making the psycho-educationist subordinate to the medical investigator in this field.

The possibility of harm among the laity by whom the book will be mostly read is great and practically unlimited, for the medical and the educational phases presented will both be accepted as delivered.

The value of the work rests on the painstaking and earnest personal endeavor in the testing of many hundred schoolchildren with the Binet-Simon tests and the establishment of a finer classification of the subnormal which permits of more accurate description.

A large bibliography is appended. C. W. T.

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EDITOR

PUBLICATION COMMITTEE { W. H. BREUER, M.D. Chairman
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M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE PROBLEM OF FEEDING THE YOUNG IN WAR TIME*

E. W. SAUNDERS, M.D.
ST LOUIS

PART FIRST

This paper is in no sense exhaustive or original; it is only an attempt to summarize the more important conclusions up to date concerning the alimentation of the young, and to offer suggestions both for legislative enactment and for the guidance of individual physicians. The experimentation on these lines has been mostly done on birds of various species and on small quadrupeds. The results, however, have proven most valuable to the stock raiser and the poultryman, and may be assumed as true of man until some discrepancy is proven. It is very disturbing to read that almost all of the cereal foods found on our tables and in the nursery, when fed to young fowl or young mice, invariably produce paralysis, and eventually death within from ten to thirty days; that is, if the article in question be the exclusive food.

The fact that not only all exclusively granivorous animals but all the small mammalia as well are affected in the same way by debased grain foods, would make a strong presumption that young children whose diet is monotonous would be affected in the same way; although where milk is given as the basis of the diet we would not expect to see the same degree of damage ensue. We make no apology for making excursions into the general field of dietetics as this is necessary for completeness in the treatment of our subject.

The well-known diseases of deficiency are beri-beri, pellagra, rickets (in part), scurvy and scurvy-rickets, xerophthalmia, and perhaps others less obvious, soon to be listed.

These diseases are all found in the young as

well as in the full grown, but the last named, so far, seems to be confined to the young.

In very recent years it has been demonstrated by a few whose names should be inscribed high on the roll of fame, that in the young, besides the food necessary for the maintenance of equilibrium and the avoidance of deficiency diseases, there are subtle elements which are necessary for growth. Besides the conclusive experimental evidence they have furnished, we all have a large fund of clinical evidence, inexact but fairly conclusive, to the same effect.

These peculiar elements are: (1) Glandular fat; (2) Peculiar proteins; (3) A mineral formula approximating that of milk in all respects except iron, with the total ash approximately identical in weight with the alimentary nitrogen; (4) Food hormones (vitamines) of whose composition nothing definitely is known.

1. The available glandular fats are: (a) milk fat; (b) egg fat; (c) cod liver oil; and as far as we can tell they are interchangeable in the diet of a child in the second half year or before. Clinically we must be careful to eliminate from the consideration of the physiologic necessity of these unknown elements, the separate problem of ascertaining the digestibility; in other words, the availability for assimilation of each of these articles of food. The pernicious effects of milk fat in some children have been thoroughly studied, and in fact have been over-studied, by some of the German extremists.

Without going very far into this side of the subject we can say from clinical experience that most children can take a sufficient amount of milk fat if they be individualized as to quantity and mode of administration. The milk of Jersey cows is never suitable and often pernicious. The percentage may be varied from four to two and even less with advantage. The Bulgarian acid milk will often make the fat acceptable which was not tolerated in sweet milk. The separation of the cream and its restoration to whey, or to rennet milk, emulsified with cereal, will often solve the problem, and where these fail its separation and reduc-

* Read before the St. Louis Medical Society, Feb. 9, 1918.

tion to butter, and incorporation into a genuine cereal food will perfectly succeed. (The term genuine food in this paper means a food made out of the natural cereal and not a decoction of a debased grain.)

In Bethesda we use ordinarily a 6 per cent. decoction of a genuine flour, whole rice, whole wheat, whole corn, deprived only of the husks, not the pericarp, or the germ portion. In this connection I would remark that the ability to sustain life of the young inherent in the genuine cereal has not been determined, but thirty years ago I made a very remarkable observation.

A baby was brought to me from an isolated farm, five months old, petite, rotund, presenting light signs of rickets, anemic but not perniciously so. It had been fed exclusively on unbolted corn meal gruel from the time the mother weaned it at the age of (?) weeks. I could hardly credit the mother's statement, but before she left I was convinced that she had spoken the truth. The baby was placed on milk with corn meal gruel and did well.

In conclusion, it is a well observed fact that milk fat in the form of butter with the appropriate cereal food is often a great success. The homogenizing of fat marks another advance in infant feeding. In a large number of cases where milk fat is not tolerated in any form, cod liver oil completely takes its place, only the dose must be small at first, say ten drops to the feeding, gradually increased until the full fat needs of the body are met. The yolk of egg emulsified in the food which should contain some percentage of cereal is tolerated much earlier than is generally thought, eliminating of course the percentage of babies who have an early idiosyncrasy to ovo-albumen. In the rare case of babies who have an idiosyncrasy to both milk and egg it remains to be seen whether the glandular fat can be extracted free from the alien protein and combined with other hormones such as are contained in the natural grains and especially those in leaven.

2. The peculiar growth-proteins have been very thoroughly studied and there is no excuse for failure in this respect. While deficient in corn, they are abundantly present in wheat and cereals. An exceedingly fruitful field lies before us in the use of germinating grains and legumes. It is true of all nascent elements that they have an exalted energy in that stage whether in inorganic or organic chemistry. The feeding of cows with swill and of fowls with germinating grain have been methods of efficiency known to dairymen and poultrymen from time immemorial. Had it not been for the universal use of leaven it is probable that the Americans and Western Europeans would have fallen an easy prey to the Central Powers owing to their uni-

versal elimination in part of the vitamins in cereals so that it became sadly true that our stock and poultry were continually improving and our children deteriorating. No more degraded form of food could be devised than soda biscuit made of denatured flour in which the remaining small percentage of vitamins is destroyed in the cooking by the alkali of the baking powder; whereas, if the slovenly housewife would use leaven for rising, the precious vitamins of the germinating yeast to an unknown extent would replace the slaughtered ones. When we realize that millions of our children are fed on this form of cereal food and on fats decomposed by high heat, can we wonder at their stunted growth and sallow complexion? The peasants of Central Europe, with its natural bread, its cheese, and its malt drink, are infinitely better fed.

3. Many years ago, following the lead of Soldner and others, I had a large number of breast milks analyzed with reference to the total nitrogen and total ash, and I found that uniformly they approximated an identical ratio in a normal milk. Where the nitrogen exceeded the ash to any extent the baby was badly nourished and suffering, and in some of the English cases, where no relief was offered by change of diet, they died. Owing to the slowly developing insanity of my laboratory man I was afraid to publish the results. In cows' milk I never found any considerable variation in the ratio. I offer these facts which, owing to their source may not be facts, for what they are worth, but we all know that nitrogen cannot be metabolized without its appropriate mineral accompaniment, and that a dog fed on demineralized meat will die much sooner than the dog that received water alone. It would be interesting to administer a good mineral formula to a baby receiving a high protein breast milk who was a continual sufferer and a loser. We have all experienced the benefit of cod liver oil added to breast feeding where the fat was not sufficient. With our present experience we could not err in adding a demonstrably acceptable 6 per cent. natural cereal decoction to any form of feeding, and in this the mineral formula seems never to fail. If whey is tolerated we can always find the most appropriate and reliable mineral combination there, and owing to its being three times as abundant as in human milk small amount of whey undamaged by heat will suffice. Lusk, in his recent book, which should be in the hands of every physician who has to feed a baby (or its equivalent in up-to-date knowledge), states categorically that the whey of milk (rennet whey?) and leaven contain food hormones of great and singular efficacy. One or both of these is available in every household in our country and

when we become truly civilized the government will see that no household in the slums, the swamps, or the mountain recesses, is destitute of food hormones necessary for the child's health and growth. To this great experimenter's statement all pediatricians can say, clinically, amen. Playfair in his *Obstetrics* forty years ago, stated that whey (rennet) was the best basis for the feeding of the new-born infant artificially.

The Bethesda School has followed that leading and when the Walker-Gordon Laboratory was introduced in St. Louis it employed largely the whey-basis formula. We did it empirically and scientifically on the basis of its mechanical and physiologic availability, but now we know that the food hormones native in the whey must account for this beneficent phenomenon.

The fact that we cannot in cases of so-called marasmus obtain the same results with bulgaric acid whey would seem to indicate that the rennet furnishes the most important hormone. Of course the mineral formula plays an important part. We sometimes skim the fat and pasteurize it at 140°. To make the junket separate the whey and then feed in a difficult case in varying proportions of fat and of the fine curd added to the whey with the natural concentrated cereal decoction sometimes, and always where there is diarrhea. More commonly we use what is termed junket milk cereal, the junket being beaten with the gruel the instant that it solidifies. Thus treated it remains perfectly fluid unless it be heated above 94°. The junket treated without cereal will not remain emulsified. To this we always add the bulgaricus culture, usually in the form of a teaspoonful of bulgaric whey to each feeding.

Coming to the sugar in the diet it is apparent that a very small percentage is necessary or even admissible where most of the native sugar of the milk is retained; and where a 6 per cent. native gruel is used as a diluent, very little carbohydrate additional can be used. This I consider a distinct gain in infant feeding. As to a surplus of mineral products I have always found myself utterly unable to substantiate the grotesque claims of some of the German schools. The fact that cows' milk contains three and a half times as much ash as human milk and the further fact that the large percentage of infantile eczemas are found in infants breast fed, would seem to destroy all mineral basis for the exudative diathesis. On perusing the chapter on mineral digestion in Hunter Dunn's textbook, wet from the press, I am confirmed in all my conclusions. This rigidly exact author seems to consider this whole subject as yet an uncultivated waste. So I am constrained to think that a plus ash and a minus percentage

of denatured sweets are both distinct gains in our method of feeding.

When we remember that denatured sugar is avaricious of the phosphates found in the human system, and that young bees fed on them quickly die, we are constrained to conclude that native sugars in small amounts are much more conducive to infant health and growth.

For many years a dealer in this city has stored up hundreds of pounds of honey for our babies and we have often found that the baby who could not tolerate denatured sugars would thrive on honey added to the food, though not in the full percentage that the formula might require. As remarked before, we have more and more supplied the lack of carbohydrates by native gruels. The older children receive the less expensive sorghum molasses.

During the Civil War, when sorghum and honey were the only obtainable sweets in the Southern Atlantic states, there was a common impression that sorghum was injurious to the teeth, but I have never found any substantiation of this idea. Maple syrup is of course a native sweet containing its appropriate mineral formula and probably, like honey, some vitamins.

As much as has been done in the study of vitamins, much more of exceeding importance practically in the feeding of the young remains to be determined, and if the federal and state governments and some of the great endowed laboratories would apportion out the work among them the whole question could be settled within sixty days, so far as the animal experimentation is concerned, and we have every reason to think that the conclusions would be more or less rigidly applicable to the feeding of children.

1. What degree of heat will each hormone tolerate before diminution or destruction ensues? A little work has been done in this direction.

2. Are the hormones of whey and of leaven universal hormones of growth for children, or does each food require its native hormone? Some experiments seem to show that the first may be true.

3. Must the hormones be present in rigidly mathematical proportion?

PART SECOND

The diet of the mother, expectant or lactating, forms an essential part of this subject. For many years I have laid out the diet of the expectant mother as containing principally natural grain foods with extra amount of lime either in the form of milk or carbonate of lime as contained in egg shell finely pulverized. In this way the crumbling of the teeth so universal in pregnancy can be avoided. Some years ago the house physician at Bethesda remarked that

many pregnant women complained of weakness and numbness in the limbs and general asthenia. After some months of the substitution of the appropriate diet these complaints disappeared. In the lactating cases where denatured cereals are used severe neuralgia is often found.

Dr. Meyer summoned me to assist him in the case of a baby five months old who was strangling, apparently hopelessly. The child had the most universal osteomalacia that I have ever seen, was dreadfully anemic although rotund and almost up to weight. It was a case of rickety laryngo spasm, and by assiduous care the child was saved and lived to become a perfect baby. The mother was asked, Have you ever fed the baby anything but the breast? "Not a drop of anything." I see that you have miserable teeth and are very anemic and weak; what is your diet? "Coffee and bread and butter." What kind of bread? "White bread." Do you ever eat dark bread or porridge or cereal of any kind? "Never; don't like them." How much milk do you drink? "Never touch it." What about eggs? "Never touch them." What about vegetables, meat and soup? "Eat them sometimes." So your diet morning, noon and night is white bread, coffee and butter? "Yes."

McClanahan of Omaha recently sent out an inquiry concerning the relative advantages of breast and bottle feeding and I replied that if the mothers were fed on natural food exclusively I believed the relative advantages of breast feeding would extend several months longer than they do. At county baby shows I have been astonished and pained to find the number of country babies showing small bones and slight marks of rickets. I found that very few of the mothers enjoy a natural diet. Lily-white bolted corn meal, lily-white flour, were their chief articles of diet.

A most deplorable condition exists among the negroes of the south, of whom I have accurate knowledge in South Carolina and Mississippi. In the fall they get their corn meal from the country mill and so throughout the winter until spring, when the store is exhausted, and from that time until the next autumn they have only denatured corn meal shipped in. As improvident as they are, they have no potatoes until the early crop comes in. Bacon is now so high that they seldom buy it, and chickens they do not raise because of their general improvidence, the destruction by rats, and their incompatibility with the garden. Nothing more debased could be imagined than is their diet until the time of the early vegetables. Not only do the unborn and the young suffer irremediably, but the men are becoming so weak that the planters complain that they cannot do their work any longer efficiently. As is well known, pellagra occurs or relapses most usually in the spring.

These evils vex our righteous souls until we are ready to cry out in anguish to our government to remedy the situation at a stroke by safeguarding the nation's staff of bread in its natural or approximately natural condition. The fact that all natural foods are vastly more attractive to predatory insects and rodents than the denatured should but stimulate us to imitate their noble example in going after them. If it is impracticable to preserve and transport them in their natural state, by all means let them be separated but be legally reunited by the laws of both God and man. What God has joined together let no man put asunder; or if they must be put asunder for awhile let them be reunited. In other words, as our Society of Tropical Medicine and the medical men of the army and navy have decided that rice must be polished for keeping in transportation, let the polishings by law accompany the rice in tins or absolutely tight barrels for protection against insects and rodents.

Bags are no protection against blow flies, which deposit their young on the outside and within an hour and a half at the longest the larvæ have bored their way through the texture of the bag and are found as huge maggots later, unable to make their escape from the flour. The terrible green fly, *Lucilia Cæsar*, which enjoys the evil monopoly of transmitting poleomyelitis to men and animals, thus finds its victims. I do not believe it ever assails the denatured food, nor do rodents unless starving.

Much has already been done in the matter of flour by our commander-in-chief against the enemy forces of hunger, Mr. Hoover. It is not enough that the government advises in these matters; it must command and enforce. A sufficient supply of natural grains and legumes, cheese, butter, cod liver oil, yolk of egg, fresh milk (for the hormones seem to perish with age in milk), leaven, can be transported to every household by the agents of noble societies and by the mail carriers, to prevent weakness, deformity, dwarfing, ill health, incompetency, illiteracy and their fruits of criminality with the corresponding loss to and ultimate destruction of the state and the nation.

The failure of food supply or territorial disease agencies in the wake of war have overthrown all the great civilizations of the remote past, but it remained, *mirabile dictu*, for modern boasting civilization, while possessing abundant food supply and the scientific means of combating successfully every disease agency, to destroy our people by deliberately impairing the value of their food. The wars of Napoleon reduced the stature of the French nation by four inches. An English general recently reported that he had captured a large number of boys of 15, but later corrected the statement and

said they were boys of 18 who had not grown a fraction of an inch during this great war. Evidently the kaiser's efficiency in destruction is not equaled by his efficiency in conservation. I know families, whole families, in the Ozarks whose children are so stunted that a girl of 11 is not taller than the neighboring doctor's child of 7, and who is correspondingly weak in intellect. The family has never seen a milch cow. Owing many chickens, the children have never eaten an egg because the money from the poultry is all that ever comes to that household. Winter vegetables they are not provident enough to have. Unbolted corn meal is all that stands between them and the little graveyard on the hillside. I know through the most reliable sources of information that among our dear people of the Ozarks there are hundreds of thousands of such instances.*

Brethren of our noble profession, is not this to weep?

It is a blessed fact that the food hormones are soluble in water or in fat and may be preserved by alcohol, or salt, or glycerin. This removes them entirely from the intricate problem of feeding and puts them all in the medicinal class, as it were. For instance, the extract of rice-bran polishing can be added to the babies' food without any doubt of its availability.

For two years we have found that one of the food extracts containing the hormones of all classes of food, when added to a food formula theoretically sufficient for an atrophic infant, would secure at once a large gain in weight where none could be obtained before. For ordinary feeding purposes the pericarp is useful because of its anticonstipation effects, but in the case of atrophic infants who have suffered from gastrointestinal irritation, the oleo aqueous alcoholic extract should be used. In the case of wheat and of corn the extraction of hormones is particularly desirable because of the roughness of these foods. In wheat it is much more marked than in corn. We have found in the Bethesda community, consisting of approximately 100 plus babies, fifty aged, and 150 nursing mothers, trained nurses, patients and attendants, that 2 or 3 per cent. could not tolerate whole wheat products at all. One nurse, for instance, who was brought up on unbolted corn meal, suffered from severe griping pains whenever she took whole wheat bread, although she was very fond of it.

Oatmeal seems to have special value in the feeding of babies as the gruel may be mixed with their milk from the very beginning of life without disadvantage, as also may rice flour. Since using the 6 per cent. natural cereal food as diluent for our milk formula we have noticed a distinct improvement in the babies' strength and growth.

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UROGENITAL TUBERCULOSIS *

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There are certain parts of this subject that I do not care to discuss. I do not care to discuss urogenital tuberculosis, which is a part of a general miliary tuberculosis, for there is not much that can be done for those patients. I do not care to discuss tuberculosis of the female reproductive organs for that is a gynecological condition. I do not care to discuss tuberculosis of the external genitals for that belongs more to dermatology. With these exceptions, I will consider tuberculosis of the genito-urinary system in the male and the urinary system in the female.

I have been looking up the literature on urogenital tuberculosis, and I have found it very voluminous, very confusing and conflicting. I have attempted to reduce this mass of material to definite rules or statements of fact intending that they should be of more interest to the man who sees these cases first than to the man who makes this his special line of work.

The first rule is that *urogenital tuberculosis is secondary* to tuberculosis elsewhere in the body. It seems that the tuberculous germ has the ability to enter the circulation and leave no demonstrable portal of entry behind, and can start a primary focus anywhere. So it could and does occasionally start a primary focus in the urogenital system. But in the great majority of cases urogenital tuberculosis is secondary, for it almost always occurs in patients already suffering from tuberculosis of the lungs, lymphatics, or bones.

Another rule is that *urogenital tuberculosis is hematogenous* in origin. The infection can be and is carried to the urogenital system through continuity or contiguity of tissue or through the lymphatics, but these cases are so rare in proportion to those acquired through the blood stream from some distant, already existing focus, that the rule is that urogenital tuberculosis is hematogenous in origin.

Another rule is that tuberculosis in so far as the urogenital system is concerned is primary in two places: *the kidney and the epididymis are the parts first attacked*. Very few cases of primary tuberculosis of the prostate have been reported. Recently there was an article which said that primary tuberculosis of the prostate is much more common than is usually supposed, but it is the consensus of medical opinion that the great majority of cases of tuberculosis is primary in the kidney and the epididymis. There is a reason for this. It is the duty of the kidney as an excretory organ to separate from

* Read before the Jackson County Medical Society, Jan. 9, 1917.

the blood stream extraneous material and throw it into the urine for removal from the body. In doing this, its business, it handles among others, tuberculosis germs. It does this successfully for live, virulent, tuberculosis germs have been found in the urine with no tuberculous process anywhere in the genito-urinary system. But occasionally, if the number of germs handled is large and they are virulent or the kidney more susceptible, it becomes infected.

A similar reason has been brought out for the epididymis being one of the primary foci for tuberculosis. The epididymis embryologically is an excretory organ. It was in fetal life a part of the kidney. It was the mesonephros. So it may be that in exercising some rudimentary secretory functions it picks up from the blood stream some tuberculous germs and in that way infects itself. So the rule is that tuberculosis is primary in the kidney above, and in the epididymis below, the kidney in the urinary system and the epididymis in the genital system, and from these two points it is spread through the urogenital system.

This brings us up to the fourth rule, which is *tuberculosis is disseminated through the urogenital system with and not against the normal current.* It is spread from the kidney down to the bladder, and from the epididymis up to the bladder. The seminal vesicles and the prostate may be infected on the way. The bladder is the common meeting point of the two currents. It was at one time thought the bladder was the primary focus and that the infection was carried by the ureter up to the kidneys and by the vas down to the epididymis. This has been proven to be untrue. The following is one of the many interesting experiments performed in proving this fact: Water was injected into the bladder of a cadaver through the urethra with such force that the bladder burst and the valves of the ureteral orifices did not give way. No water was allowed to pass into the ureters in this relaxed cadaver. It is only after these orifices themselves have become diseased that the valves fail to compensate and there is a regurgitation of the infected material into the ureter and up to the kidney.

It is possible to have an ascending infection by the way of lymphatics. It has been demonstrated that there is a lymphatic communication from the bladder to the kidney accompanying the ureter. But there are so many branches given off on the way that the infection is almost always side-tracked and sent off to the lymph nodes. It is only a massive or experimental dose that would be likely to find the way from the bladder to the kidney by way of the lymphatics.

It seems strange that there is not an ascending tuberculous infection in the vas, for we know that it does occur in gonorrhoea and other

infections. The authorities investigated this point carefully and generally agree that tuberculous infection does not as a rule travel from the bladder or urethra along the vas to the epididymis.

There are four general rules, to all of which there is an occasional exception:

1. Urogenital tuberculosis is secondary to tuberculosis elsewhere in the body.*
2. Urogenital tuberculosis is hematogenous in origin.
3. In so far as the urogenital system is concerned it is primary in two places, in the kidney and in the epididymis.
4. Tuberculosis is disseminated through the urogenital system with and not against the normal current.

So much then for the four general rules. Now I will consider the condition a little more in detail.

Case History.—Here, as in tuberculosis anywhere, in taking the family history it will probably be learned that one or more members have had tuberculosis. The chances are that the patient will not be in very poor health, for as a rule the primary focus of infection is not active. It does not seem to be very well known that urogenital tuberculosis is compatible with good health. There is not the same picture here that is presented in active pulmonary tuberculosis. There is not the pallor and emaciation; the patients are not nearly so likely to lose weight and some of them even gain weight.

Physical Examination.—If the epididymis is involved there will be found a nodular enlargement, and if far enough advanced there may be a sinus, but there is very little pain. On palpating the kidney areas a mass may be found in the loin. This may be an enlarged kidney or one with pelvic retention or it may be the well kidney which has taken on a compensatory hypertrophy on account of having to do the work of the diseased kidney. The chances are, however, that on palpation, the kidney areas will be found to be normal. These patients do not seek the doctor on account of ill health or loss of weight nor on account of any tumor or enlargement. The thing that brings them to the doctor is the cystitis which accompanies the condition. Tuberculosis of the genito-urinary system manifests itself principally in the bladder. Even before there is any inflammation or other lesion, the bladder will present the symptoms of a severe cystitis.

I want to digress here a little and say something concerning cystitis in general. There is no such disease as chronic cystitis. There is no such disease as cystitis per se. Cystitis is not a clinical entity. Cystitis is a condition depending on causes outside the bladder. The bladder is a very tolerant organ. It is only after

persistent and repeated inoculations that it will become infected. It is necessary sometimes to have these inoculations accompanied by traumatism or some interference with the blood supply, or some interference with the mechanism of filling or emptying itself, for the bladder to become infected. Misplaced pelvic organs, deposits of inflammatory exudate, tumors and the different prolapses and ptoses are causes of cystitis. A cystocele in a woman may give rise to a similar condition to an enlarged prostate in a man. They both may have residual urine, the mechanics and the symptomatology are similar.

The bladder is not only a tolerant organ but it has great powers of recuperation. I myself have seen a bladder which might be considered a tuberculous cavity on account of the very severe inflammation and the deep and extensive ulcers which covered its walls, and after the tuberculous kidney, which caused this condition, was removed, the bladder became normal. I have seen bladders that seemed ruined, due to back pressure on account of an enlarged prostate. After the prostate was removed these bladders were relieved of the inflammation and regained their tone. Of course there is a limit. It is possible to wait too long. Since there is no such disease as chronic cystitis the folly of directing the therapeutic efforts entirely toward the bladder is apparent. Yet this is frequently done. Some of these patients go the rounds. The therapeutics is modified but is directed entirely toward the bladder. When the cause is removed the bladder will get well.

Laboratory Procedures.—Given a case of cystitis which from case history and the physical findings leads one to suspect that it is tuberculous, how are you going to prove it? The first thing to do is a urine analysis. Tuberculous urine has five characteristics which help to mark it as such. In the first place the urine is acid, while the urine in most cases of cystitis is alkaline. Most germs act on the urea in the urine in such a way that ammonia is set free which makes it alkaline. Tuberculosis germs do not do this. Another point is that there is pus and on ordinary microscopic examination there are no germs to cause the pus. Then the pus is lymphocytic or mononuclear. There may be some blood cells present, and it is usually possible by the proper staining methods to demonstrate the tubercle bacilli. If there is a mixed infection, however, this whole picture is changed. The urine will be alkaline and there are many germs to account for the pus, and the pus will not be lymphocytic but polymorphonuclear.

Sometimes it is exceedingly difficult to find the tuberculosis germ in the urine. Often it is only after many trials that they are found. The method employed is similar to the staining

method in sputum. In urine it is possible to confuse tubercle germs with the smegma bacillus. Tuberculosis germs are both alcohol and acid fast. The smegma bacillus is only somewhat acid fast and not alcohol fast. So if the proper cleanliness is used, the urine obtained by catheter and the specimen is decolorized with both acid and alcohol there should be no confusion.

If the tuberculosis germs cannot be found the inoculation of a guinea pig may be tried. Some of the urine is obtained and injected under aseptic precautions into the peritoneal cavity of a guinea-pig. In six weeks the guinea pig should have a tuberculous peritonitis. It has been said that if the guinea-pig is exposed to a massive dose of the roentgen ray immediately before inoculation it will make him more susceptible and the peritonitis will develop in eight or ten days, which would be of great benefit and saving especially to a patient in a hospital. It was at one time thought that the guinea-pig test was infallible, but there is now and then a case in which it fails.

The Von Pirquet test may be of some value in a negative way. If it is not positive it would be evidence that the cystitis is not tuberculous.

The roentgen-ray picture is of value, but particularly in the late cases where there is a calcareous deposit or areas of caseation in the kidney.

The cystoscope is of a very great aid in the diagnosis. The cystoscopic appearance of the tubercles, the tuberculous ulcers and the drawn appearance of the ureteral orifices are often sufficiently characteristic to make a diagnosis. But here, as in the urine analysis if there is a mixed infection the picture changes and a diagnosis from the cystoscope picture is impossible.

As a rule the diagnosis of tuberculous cystitis is not difficult, but again it is only after repeated attempts that it can be made. If one persists it can always be done. The very multiplicity of the diagnostic procedures is evidence that it may be difficult. After the diagnosis is made the different foci then must be definitely located. Even if you know the epididymis is involved the kidney must be excluded for these two are sometimes attacked simultaneously. At the same time it should be learned by ureteral catheterization if there are two kidneys and the nature of the urine that comes from each and the functional capacity of each kidney should also be ascertained.

Treatment.—Having made the diagnosis and located the different foci, treatment should be considered. The treatment of urogenital tuberculosis is surgical in the first place, then medical. The surgery should be conservative. If the epididymis is involved it should be removed together with the vas high up. The testicle if not involved should be saved. Extensive opera-

tions were at one time recommended for the removal of the testicle, vas, seminal vesicles and prostate, but those extensive operations are not recommended any more. Since urogenital tuberculosis is secondary it is possible to remove it all anyway. The prolonged operation and prolonged convalescence lowers the resistance and allows the original latent focus to be lighted up.

Until recently it was thought that the majority of cases of renal tuberculosis were unilateral, but it is now thought that a majority are bilateral. Cases have been reported which were unilateral, the infected kidney removed and later the remaining healthy kidney became infected as the first one through the blood stream from primary focus. So nephrectomy is not so enthusiastically recommended as formerly; but it seems to me if only one kidney is infected the patient has a better chance if it is removed early. Tuberculous lesions of the kidney are never cured.

Surgery is merely the cleaning up of the localized foci. The real curative work is done by medical and hygienic measures. Tuberculin is claimed by some to be dangerous in that it might disseminate the disease but most authorities agree that it is of value.

CONCLUSION

Whatever is done, to obtain the best results it should be done early. The value of an early diagnosis is evident. There is no one thing that will help this more than to remember that there is no such disease as chronic cystitis.

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SOME DISADVANTAGES OF THE UPRIGHT POSTURE*

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There was a time when man was regarded as physically perfect and morally hopeless—for men, with large and unappreciated personal equations, preferred to interpret Scripture rather than study the form they were talking about. There was also a time when the erstwhile leaders in thought occupied the exalted position which made it unnecessary for them to prove their contentions. They merely admitted the statements were true and few had the temerity to challenge the facts. Naturally times have changed and we have at least two schools—the one busily adjusting the facts of today that they may not controvert the fancies of yesterday, much after the fashion of our colleagues, the homeopaths, claiming a complete

vindication for Hahnemann in the modern serum therapy; the other basing his philosophy on the problems of today with those of the past merely in perspective as an experience which must not be disregarded.

The facts in evolution are by no means transparent and the deductions are open to wide personal differences. These are the days of advance. These are the days when a "school-mar'm," who has acquired scientific insight through having once seen the moon in a telescope, adds the words "mutant" and "dominant" to her vocabulary and charges headlong on the field of eugenics and euthenics. Here is the unfortunate hysteria of science. An unqualified person, who goes about to preach the doctrines of moral uplift and social service; who instructs her children that great care must be exercised in the selection of parents; and that the defects in the "Calico" family are to be visited on the tenth generation. These are the days when virgins of tender years gather together to discuss the constitutionality of a law that prescribes a control for the female sex organs and not for those of the male. This is the hopeless side; for should a man of training and judgment attempt to set these misinformers right he will meet with nothing but invective from equally unqualified sources. I would therefore assure you in advance that I am not opposing the scriptural writings, and eminent theologians have interpreted the passage, "in the image of God created He him," to refer to the spirit and not to the flesh.

Man may be considered the only one of the higher animals capable of adjusting the condition of his surroundings to his needs or taste. The method of attaining the desired end is prompted by physical discomfort or psychical appreciation. The brain itself feels nothing and is therefore to be considered as a sort of second self, more or less removed from the physical man both in popular conception and in psychologic teaching. The anatomists and physiologists, however, regard the brain as one of the physical organs direct in its relation to the structure and function of the body complex.

It is man's knowledge—the development of his brain—that determines the adaptation of the environment. The physical man—the house the brain lives in—is merely a convenient mechanical accessory to the mental self, and should this physical element in man force itself on his consciousness the inconvenience of a body is at once evident. The separation of man into "me" and "my body." Whence came it? We have little information regarding our remote ancestor to whom we generously apply the term "the missing link," except that he was once on a time not as high a form of being and that he was probably very hairy and surprisingly like

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an ape. He was possibly a recurring mutant or sport on some simian limb—different from his brothers in that his brain was a little better developed. Just as men of today with exceptional brains distance their less gifted fellows, so this man—let us assume—through his recurrence, developed a new type bearing all of the evolutionary earmarks of his ancestry, possessed of a more efficient thinking apparatus, and because of it more able to survive and to select among his fellows those most fit. We can safely infer that the progressive evolution in man was due to his peculiarly advantageous relation of grey and white matter, and that as the brain developed the body followed but at a very respectful distance.

It is probable that this relatively gifted prehistoric being found it desirable to assume the permanent upright position as opposed to the semi-upright of the apes for the following reasons: In restricting locomotion to his hind legs and abandoning his arboreal habit, he freed the front legs and could specialize them for purely prehensile purposes—organs well adapted to such variation in function and entailing but little structural change. He was already endowed with sustained binocular vision, as are all of the primates, and had long outgrown the nocturnal habits of the immediately preceding line of animals—the half apes or prosimians.

The development of the front legs for prehensile purposes led to the acquirement of hand dexterity, which is not an hereditary matter but is trained, as every parent well knows. Here his binocular vision first troubled him, and it troubles him more at the present time because he began to do an abnormal thing—near work. He began, let us say, to apply the dexterity of his hands at the prompting of his brain in his adaptation of his environment to his needs. He fashioned rude garments and manufactured implements, warlike and domestic. He trained a convergence of his eyes that he might meet this imposed condition and translated them from distance organs to structures which could also see well close by. The acquirement of this accommodation shows its recent advent negatively in that it is one of the first things lost in the degeneracy of age—presbyopia.

Growing intelligence led possibly to the transmission of more and more complicated ideas to other individuals of like experiences in the form of speech, whether gesticulated, spoken, pictorial or written.

These then are the things in which egotistic man excels all animals: primarily in the character of his brain, and secondarily in the maintenance of the upright posture, the acquirement of hand dexterity, and lastly in intelligent articulate speech. It is a fact, generally speaking, that last acquired things are first lost; and this is illustrated positively in that the baby walks

before it talks; or in the depression of the adult in narcosis. The drunken man loses his faculties in about the following order: First, self-restraint and any or all of the finer side of human nature; next, speech becomes incoherent; balancing becomes difficult; speech is ordinarily lost before the individual reaches all fours, and then blindness follows; and finally hearing and lastly reflexes of ancient origin—protective and the like.

The adaptation of the individual to his environment is perfectly apparent and the result is forced life under abnormal conditions, which is commonly called civilization and which is equivalent to domestication in the animals. Unnatural selection is the key-note to either proposition and may eventually result in our decline. Brain development was the cause of our ascent and brain development may eventually cause our elimination. It is difficult to maintain the proper balance between brain and body, and it will be more difficult to do this in the future unless we can convince some of our learned men that it is a far more difficult and cultured thing to be able to walk on one's hands than to conjugate some irregular French verb. Intelligent people like to select intelligent people and this in itself tends to jeopardize nature's second law which may not be violated. The physician is therefore one of the greatest enemies to evolution in the animal sense because it is his duty to select individuals who would be eliminated under normal animal conditions.

This last remark may appear to substantiate an erroneous and popular idea that the laws of animal evolution do not obtain for man. I once saw an article of this stripe in which the writer argued that women ought not nurse their children because nature is already pointing the way to the bottle in suppressing the breast function. The breast is the last acquired sex organ and is functionally the last to take up its work. Last acquired things are first lost and if there is a suppression in breast activity, may it not be nature's way to eliminate the sexually unfit? Might we not expect a higher percentage of sterility in artificially selected individuals derived from a stock which could not nurse the young?

Our brain development plus the abnormal environment of the ultra-civilized state may lead to four possibilities: First, a return toward more normal conditions and a better relation of the physical to the mental man—a so-called reversion to the inferior classes; second, elimination of those babies who through selection are possessed of too large a head in proportion to the pelvic development of the mother; third, elimination prolonged through unnatural selection of individuals bred from a poor physical stock (sterility); and fourth, race suicide. I shall speak on this point in particular later on.

The maintenance of the upright position was mentioned first among the secondary factors which contributed to man's ascent. First because it was essential to the freeing of the hands and to the application of growing ideas. Without it nothing would have been accomplished and it must therefore be reckoned as the second most important human attribute. Our hands after all are much like those of the monkey and the chief difference, apart from a few little technical muscle separations, is to be found in the thumb. This digit is a relatively short member in the ape family and is rather firmly tied to the side of the palm. The amount of opposition is poorly developed and in this it resembles the thumb of a baby closely. The trick of picking an object up with thumb and forefinger can be done by the monkey, of course, but crossing the thumb over the palm of the hand is impossible.

It has been stated that man climbs his ancestral tree and that he carries on his person unmistakable evidences of his ancestry. Whatever the extrinsic or intrinsic factors may have been which prompted our remote ancestors to assume and maintain the upright posture, this much is true, that despite the myriads of years spent in readjusting the body to this unnatural attitude, adaptation has been incomplete and will always be imperfect. I would direct your attention to only five organs or parts; first of all to the lower extremities where adaptation has been fairly complete; second, to the correlation between the upright position and lack of proper adaptation in the eyes; third, to the results in the respiratory tract; fourth, to the digestive tract; and finally to the organs associated with procreation.

I do not care to go into the excruciating details in the structure of the lower extremity joints and will therefore hit merely the high places sloughing the technicalities with which we are wont to clothe our ignorance. When a baby is born it carries the hip and knee joint semi-flexed and the foot semi-supinated (inverted). Should any of you care to experiment what your assumed upright posture has done to these joints, lie on your back and try to clap the soles of your feet together. The hip-joint is carried to the maximum of extension so that the heavy ilio-femoral ligament is in direct apposition with the joint capsule; and this, the learned tell you, is a wise provision of nature to permit man to brace his weight against his ligaments. When the hip-joint becomes diseased it assumes a semi-flexion; and here the surgeon steps in with explanatory anatomy and credits the ilio-psoas with a distinct protective function to the joint. Which is also rubbish. The reason the hip flexes is because the joint cavity will hold the greatest amount of fluid in that position; and the reason this is true is because it is the animal normal. The

surgeons may tell you that the thigh may be flexed until it comes in contact with the trunk, when anyone can demonstrate that this is not true by standing on one leg and trying it. When an animal wishes to increase his stride he humps his back and brings the pelvis into play; and man does exactly the same thing.

The knee-joint is also misinterpreted and if it were designed for the present use in man, why did nature put a torque on the joint at the very time it receives the maximum thrust from the superposed weight? The answer is obvious and the knee involvements are serious. Why do we have a patella at the knee and not at the elbow when both tendons cross the joint at about the same angle? The answer is not to be found in man but in animals. The ankle-joint, apart from nutritional disturbances, is a relatively good joint except if one were to devise a hinge on the end of one leg would it not be a good idea to have the ligaments attach to the same bone and not let the weight-thrust tend to pry the astragalus against the os calcis? Which ligament is the one which goes in a wrench, the internal or the external and has this any relation to the inverted foot of the monkey? Is the ankle wrenched in extension or in flexion?

However wonderful the poet may find the human hand he has little to say about the foot, which after all bears the brunt of the new acquirement. Do we suffer with our feet and is this in relation with our ancestry of the inverted foot and non-walking habit? Look at the back of your shoe for the answer. Do we try to naturally throw the weight against the closed side of the arch and walk pigeon toed? Comes the school marm with the admonition, "turn your toes to ten minutes of two." Do we attempt to correct the errors in the heel in the rotation joint and allow the front part of the foot to pronate? Comes the shoemaker who says the shoes will not stand up unless he places a steel shank to prevent this very thing. Finally our arches break and we go to the learned doctor who promptly puts our feet in braces and builds us an archprop which gives relief because we walk as if we were on eggs. A purely symptomatic treatment. The impractical anatomist, however, finds the secret in the heel and ascribes the cause to faulty development of the inner tuberosity of the os calcis which in turn he ascribes to our ancestry. Correct for the defect in the heel and encourage the rotation of the foot by removing the shank and you will relieve most of the difficulty. Which side of the foot normally receives the impact, and does not nature try to compensate for the faulty alignment by placing a buffer between the pressure and the irritated part—a corn? A little more attention to the feet which were not designed for present uses, and a little less attention to ankles, and the race would be happier for it. No one versed in the

structure and musculature of the foot will deny that it was built for nobler work.

It is not my purpose to discuss the head and its lack in balance or the disadvantages of the types of articulation at the atlas and axis. We all know that the head balance is poor and that the head of the adult tends to nod when the essayist is not particularly interesting or entertaining, and I would call your attention to an obvious lack of adjustment in that important organ of learning, the eye. It seems that the eye too has a past to which I have very briefly referred and the point I would bring out is an explanation of why the eyes roll up and out during sleep and death. Is this the tendency of a so-called balanced organ to return to the animal normal? We can account for the rolling out very readily because it has been observed in all mammals that the degree of divergence is increased after death. An indicator of where the eye originally came from—the side of the head—but why should it roll up? If you get down on all fours and look about you you will discover that either you must extend the head to the point of pain or your vision will be interfered with seriously. You are holding your head in the normal animal position (extended) and the reason why this is difficult is due to the mighty development of your brain which lies in front of the support. The reason why your vision is interfered with is not quite so easy of explanation. The primates are the first animals with sustained binocular vision and I might illustrate what I mean in this manner: when you look a cow full in the face the cow will turn her head to one side for two reasons; first, she can see you better with one eye, and second, she lacks interest and therefore attention. You, however, because of a ready translation in personality, infer that here is a demonstration of the influence of mind over matter and the thought would never occur to you that the cow probably sees you better with one eye than with two. Second, the cow prefers to move the head rather than the eyes which you, with directly opposite tendencies, readily translate into terms of embarrassment. Therefore, when you rose to your hind legs you found it was easier to drop the eyes and set in your muscles of balance accordingly. If you question this, select your highest building and count the number of windows on the top floor from a position across the street. The reason for your neckache comes through faulty adaptation in the balance of your head, and the reason for the eyeache comes about in that the more you hold your eyes in the animal position the more they become divergent, because sustained binocular vision is one of the last things acquired and demands identical points on the retina. The position of the eyes at rest is, therefore, up and out and not when they are parallel, as most oculists maintain. The

more you wish to converge the more you must get away from the animal position. Therefore, I would preach a heretic doctrine to you. "Train up a child in the way he shall go and when he is old he will not depart therefrom." Teach the children to look cross-eyed while they are young and when they are older they may not suffer from an insufficient squint. Up with the chin and down with the eyes; and why is it difficult to do, and must the doctor help adjust this individual to meet the conditions of an environment?

I would next consider with you the respiratory tract because of certain obvious disadvantages imposed on it directly and indirectly. One of the disadvantages of which I shall speak has probably not occurred to you and is of great importance.

The vertebral column of the animal is placed about on the horizontal. The trunk is supported by four legs and the weight carried by the front legs is transmitted to more or less vertical ribs. Respiration in the animal, like that in man, is of two types—costal and diaphragmatic. Costal respiration is accomplished by swinging the vertical ribs forward—a movement not affected by gravity and requiring but little effort—and relaxing the muscles for expiration. Diaphragmatic breathing results from contraction of the diaphragm and caudal displacement of the abdominal viscera, with passive return assisted by gravity.

The assumption of the upright position resulted in several things. The support of the front legs was lost and they in turn must be carried on more or less horizontally placed ribs. The costal respiration means that not only must the ribs be raised against gravity, but the weight of the upper extremity must be lifted as well, and the traction of the abdominal muscles used in balancing must also be overcome. In diaphragmatic respiration gravity assists in the inspiration, but this is in part counteracted by the tension of the abdominal wall. The flat chest and flat abdomen is characteristic of man. Breathing in both sexes when asleep is costal, but when awake it tends to become diaphragmatic in the male and remains costal in the female. Is there an explanation for this seemingly contradictory change? I will admit it limps a little, but is the best I can do at present. The male is usually stronger and more active; the upper extremities are heavier and more powerful; the exercise of upper extremities means fixation of the upper five ribs; and the type of dress is such that it encourages laziness and diaphragmatic breathing. The female, on the other hand, is not so strong and active; she does develop the muscles of her upper extremity to the degree in the male; and the type of dress tends to encourage the normal costal respiration.

To this must be added a possible adaptation toward pregnancy of which I shall speak later. It is my opinion that a woman wears a corset because she breathes with her chest and not the reverse. But if any woman doubts that corsets cramp the abdominal respiration, let her take a pail of water in each hand and climb two flights of stairs. She will find the greatest inconvenience does not arise from the effort but from lack of breath. Expiration is made easy and inspiration is made more difficult and this may be illustrated as follows: Given a chest with 100 cm. circumference at maximum inspiration and say 85 cm. maximum expiration. What is the normal; probably about 90. The efficiency of a person's lungs does not depend on how much he can expand above the normal but how much can be contract below the normal. Life insurance companies do not seem to appreciate there is a very great difference. Large chest expansions are the rule because gravity tends to hold the chest contracted and large chest contractions are rare for the same reason. I do not need to point out wherein a man with well inflated lungs is better off than one with poorly inflated ones. We do surprisingly well under the circumstances and it is not strange that adhesions at the apex are common.

When an individual has bronchitis or pneumonia we put him to bed largely on the basis that the bed is indicated and reparative processes will be the better for cutting down physical activity. There is another reason which I would emphasize. When man occupies the vertical, the major portion of his respiratory tract is also vertical and the cilia, which were designed to push along the mucous on a horizontal line, must now work against gravity and that their efficiency is markedly impaired goes without saying. Add to this the life under conditions of domestication, which are very abnormal, and it is really a wonder that we do not suffer more seriously than we do. Luckily our chemical adaptability in part compensates for our physical disadvantage.

The digestive tract in the animal is attached to the back wall of the abdomen by a thin serous membrane, the peritoneum, which is of the same function and ancestry as the pericardium and pleura. The membrane in the case of the digestive tract not only serves as a lubricator but also affords a channel for the passage of vessels to and from the tract. The viscera are supported by a horizontal abdominal wall and the tendency in animals is for displacement toward the diaphragm. When an animal has eaten heartily it lies down and further supports its digestive tract on the ground. The upright position hampers the digestive tract in a number of ways. To breathe properly the individual must throw his chest out and his abdomen in and crowd the already cramped tract against the compen-

satory convexity of the vertebral column. The flattened abdomen, as I have said, is characteristic of man and, as any physician knows, the flatness is much more real than apparent. Peritoneum, that bugbear to the medical student because he cannot justify the numerous folds and ramifications in his own mind (to which I heartily agree), is now translated into an organ of support with no structural change, and twenty odd feet of small intestine is hung from a vertical abdominal wall by this thin membrane having an attachment area of about five inches. The result is that not only are the viscera markedly displaced toward the pelvis, but the weight is directed against a part of the abdominal wall never designed and never adapted to withstand such strain. The animal type of hernia is rare in man (umbilical) while the large percentage of rupture in man practically never occurs in the animals.

The displacement of abdominal viscera is a very live topic. We have hitherto reckoned the normal relations of viscera to be those established by experience in the dissecting room. This has long been known to be fallacious and for the following reasons: (1) When a person dies he is ordinarily in the horizontal; (2) the relaxation is far more pronounced than can be produced in a living individual, and (3) the rigor produces displacement. We have interpreted the usual findings in the cadaver into terms of enteroptosis, gastropptosis and the like in the standing living individual. Having found this condition we ascribe to it a number of reflex manifestations which are more likely of psychical origin. The normal position of the pylorus has been shown by roentgen-ray plates to be well below the navel in the normal standing individual. I believe it is time to warn the surgeons against attempting to nail viscera into a place where they are supposed to be and, save in the case of the spleen and kidney, greater harm than good may come of it.

The digestive tract as the one great system directly under the control of our mind, is naturally long suffering. We eat too much and too hurriedly and we do not rest after our meals as does the animal but try to keep an excess of blood in our abdominal vessels and cranial vessels or musculature at the same time. The consequence is perfectly apparent in terms of cerebral anemia, and one of the strongest pleas for the after dinner cigar is that it keeps the smoker sitting quietly—and sitting is no small feat for the male. Jokes after a hearty dinner are not appreciated because of the dulness (cerebral anemia) or because it hurts us to laugh. This hurting is not due to distension of the stomach or to pressure of the stomach against other abdominal viscera, but to the traction from false posture and added weight. The pain may readily be corrected by lying directly on the abdo-

men after the manner of the pig. The chief asset in lying a-bed in diseases of the digestive tract is that it overcomes the additional effort imposed by gravity.

The appendix and the gallbladder are sufficiently discussed topics and I will relieve your minds by not referring to them at all, and I will also skip over the stellar example of lack of fixation—the kidney and the v-colon.

Every animal arrives at a period of maturity that it may exercise the procreative function and when the animal has fulfilled the second law of nature he is ready to die. The disadvantages in man's psychology are not comparable to anything found in the animal kingdom and are due to that inconvenient accessory to self—the body. It has been quite definitely shown that the sex psychology is due to the secretions of the sex glands themselves and this psychology is either inhibited or stimulated by the mental state. In the case of the human male the desire to procreate has been translated into terms of psychic pleasure rather than actual sex cell. The man does not suffer materially from his imposed upright posture except in varicocele and hydrocele and the like, except when he reaches the period of sex uselessness and develops a hypertrophied prostate. The left testicle does not hang lower than the right because of the greater venous head or the manner of dress; neither does it descend first for any other reason than a purely hereditary one.

The woman after all is greatly incommoded, first by the unanimal condition of frequent ovulation, and second, by the mechanical disadvantages under which her sex organs operate both in the pregnant and nonpregnant state. The crowding of the small intestines downward finds a frequent result in displacement of the uterus, particularly retroflexion and the alleged use of the vagina as a means of support; and the analogous position of the sacro-uterine ligaments are excellent indications that the suffering female might well stay in bed and lie on her stomach. The problem of the relation of ovulation and menstruation I cannot take up at all and whether the monthly flow has anything to do with the upright posture I am by no means prepared to discuss.

The great factors in eliminating man through prevention of conception, through mechanical interference with pregnancy, and through restriction of the number of children, however, is a serious thing and something which can well be discussed from an anatomical viewpoint. There is little doubt but that the pregnant woman labors under a disadvantage because of her condition; the abdominal wall is poorly placed to stand the strain and poorly adapted to distension because of its translation into balancing musculature; the venous congestion in the abdominal region is exaggerated; the pressure of the child on the pelvic veins interferes with the

proper function of the lower extremities and in extreme cases results in helplessness. Compare this condition with that of the female animal that appears to carry the progeny, and even a greater proportionate weight, without serious discomfort. Next come the factors of the change in the shape of the pelvis and the fixity of its articulation owing to the unnatural posture; and finally the influence of the weight thrust on the pelvic bones particularly in nutritional disturbances, such as rickets. Until men and women can be educated to their duty to posterity even at the expense of bodily discomfort, the talk of race suicide will fall on deaf ears. It is a very simple matter to talk in the abstract, but when a body begins to interfere with what the possessor wishes to do the answer is indeed very simple. The answer is after all the problem and not the solution.

The function of the physician is selection of the unfit in an animal sense and the majority of doctors realize they have a foe in the force of gravity. It is quite out of the question to select for a more rugged stock under the present system; it is equally impossible to eliminate the unfit. Much, however, can be accomplished by paying a little more attention to the body and regard oneself as twins—the one just as important as the other. The cure can never come and we have adapted ourselves in so far as we are able and suffer but little except where disease enters. Nature will finally assert herself just as she does in the aged. The eyes begin to lose efficiency; the teeth must be replaced with a false set; the diet must be regulated; and the exertion limited. This represents the unproductive third of man's life as far as his body is concerned, while the "me" part lives on and with skilful adjustment prolongs its usefulness even to three score years and ten. The upright posture is therefore not without its decidedly bright side and the intelligent selection of the aged after all neither thwarts nor interferes with the laws of evolution as they obtain for animals. If we had not compensated for the errors in our anatomy in a more or less satisfactory manner we would surely *not* have arrived at our present advanced state. I would repeat, the body follows the mind at a very respectful distance and to all intents and purposes functions very well in health; but in disease the disadvantages in standing on our hind legs assert themselves, and we reckon gravity as a foe which may be eliminated by placing the person on the horizontal. Blood pressure will drop, respiration will be freer; the traction on the digestive tract will cease; and the thousand and one little physical worries, which under normal conditions would never be noticed, will be eliminated. It may be that after all the best title one could give this paper would be "A Defense of Lying a-Bed."

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TOXEMIA OF PREGNANCY*

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In this paper I will discuss only the toxic vomiting and eclampsia, endeavoring to summarize the results of some of the later investigations of these conditions.

Toxemia of pregnancy may be defined as a state of the blood and metabolism arising from faulty proteid and fat—metabolism due to an undetermined toxin arising from the growing ovum, producing certain pathologic changes in the liver, kidney, thyroid and spleen. Many of the trivial ailments of pregnancy are the results of minor changes in these organs which have not progressed to the more serious disturbances; however, some of the minor conditions are due to neurotic or other external causes.

Pernicious vomiting, eclampsia and the acute yellow atrophy of the liver, sometimes seen in pregnancy, were once thought due to different causes are now thought of as having a common cause, except the renal type of eclampsia.

Leo Loeb in 1909 showed that the corpus luteum sensitized the endometrium for the reception of the fertilized ovum. This action lowered the resistance of the host to the foreign proteum (ovum), thus making it possible for the fertilized ovum to exist and not be absorbed. Now that the product of conception is planted and growing, a relative immunity must be established by the pregnant woman against the product of conception. The ovum acts as an antigen and stimulates the formation of anti-bodies by the host; this is in accord with Ehrlich's theory of immunity, and from this assumption he concluded that if the host does not react to the antigenic action of the ovum such a condition as toxemia will result, and if the inhibiting action against the invasion of the ovum is lessened it will follow that the syncytial or outer fetal layer will tend to grow more profusely, as has been shown by G. Acconci that in toxemia there is an atypical proliferation of the syncytium which penetrates the villi. In some cases conglomeration of the villi is found that leads to degeneration fibrous formation, and infarction when the blood-vessels are involved.

It is from these changes that the decaying products pass directly into the blood stream. J. Young also pointed out that the toxemias in pregnancy are due to the liberation of the products of early autolysis of the placenta because they are associated with recent infarction of the placenta which is so constructed that the products of the dying patch can pass directly into the blood stream. Working on this theory he isolated from the healthy placenta soluble

material which, when injected, caused convulsions, focal necrosis in the liver and degeneration of the kidneys.

Hypert thyroidism has been suggested as a cause of the toxemia; probably it is only one segment in the vicious circle which is present in these cases. Howell says that one of the functions of the thyroid is to destroy or neutralize toxic substances of metabolism for the rest of the body. The normal physiologic enlargement of the thyroid is rarely seen in toxemia of pregnancy, especially eclampsia. The formation and retention of this toxin causes minute hemorrhages in the liver and areas of degeneration and necrosis in some cases which progress to the more serious acute yellow atrophy of the liver. The liver may or may not be enlarged. The changes in the spleen are similar to those found in the liver. Syncytial masses are sometimes seen in and about the areas of degeneration. They were once thought to have been swept by the blood stream from the placenta to the liver and found lodgment there. This condition is probably of no consequence in the causation of liver changes, as it is also seen in normal pregnancy.

The kidney changes are not constant and may accompany a previous nephritis. In the kidney of pregnancy, if such exists alone, the pathology is an acute fatty infiltration which soon disappears after delivery; rarely an acute parenchymatous nephritis with atrophy of the kidney will follow.

Blood changes may occur, similar to sepsis with thrombus, embolism, petechia, surface extravasation, and finally icterus may be seen which is a direct result of the blood state. Constipation, lack of exercise, pressure, and the usual excess of appetite seen in late pregnancy add to the burden and tend to increase the work of the already damaged organs.

True nephritic eclampsia is difficult to diagnose, except post-mortem and by intricate chemical tests. It is hoped that in the near future microchemistry of the blood will assist the diagnostician. Convulsions due to uremia, the result of nephritis which existed previous to pregnancy, would sometimes complicate the diagnosis and are not considered true eclampsia.

That pure liver cases exist is proven by the fact that numerous cases are reported in which there were no kidney changes and are also proven by necropsy.

A certain number of these toxemic cases will show an extreme acidosis; others with symptoms equally severe will show no more acidosis than normal pregnancy.

A high ammonia coefficient which persists is usually associated with diacetic acid and acetone and with the absence of casts, albumin and edema means hepatic toxemia.

* Read before the Greene County Medical Society, Sept. 14, 1917.

A low nitrogen diet will decrease the ammonia, but in some cases an acidosis will persist.

The low ammonia content with no acidosis associated with vomiting means other causes besides toxemia; also when the ammonia curve shows wide variations there are other causes for the vomiting.

The acidosis is due to an impaired liver function which fails to make proper disposition of the fats and proteins. The lessened urea usually seen in these cases plus a high ammonia coefficient is due to the fact that some of the nitrogens instead of being built into urea and eliminated as such are eliminated as ammonia which combines with the acids as a protection against acid intoxication. The acidosis is not a cause of the toxemic signs altogether, but may aggravate the pictures. The proper treatment of this condition may relieve many of the symptoms.

A given case of persistent vomiting accompanied by early headache, motor excitement or apathy, stupor, and coma means toxemia. This condition is always accompanied by an early acidosis, and if the kidneys are early involved the blood pressure will be high.

The nontoxic type, which is of longer duration than the toxic type, differs in that there is no early acidosis, headache, stupor and coma. These conditions come later as a result of starvation, while in the toxic cases they die not from starvation but from the early effects of the poison on the high nerve centers.

Eclampsia is a condition making its advent during labor. The condition is too well known to discuss, but is preceded by signs and symptoms which we should note and correct, if possible. These signs and symptoms of the preeclamptic state are headache, ringing in the ears, dizziness, dimness of vision, blindness, nervousness, digestive disturbances, high blood pressure and edema, when the kidneys are damaged as shown by an urinary examination, which should be made every three or four weeks.

There is about one case of eclampsia in every 300 pregnancies, 20 per cent. of which die, and practically all of which could be saved by the early recognition of the preeclamptic signs.

The prognosis and treatment of toxic vomiting depends to a large degree on the early termination of pregnancy. If allowed to progress too far, however, emptying of the uterus will do no good. Drugs are of little value, but all have been used and recommended, from popcorn to chickens' gizzards. In this condition, as well as others, where so many drugs are recommended, none are usually of much value. However, close watching, increase of elimination, quiet rectal feeding, proctoclysis, and sedatives will carry many of the milder cases and give us time to arrive at a correct conclusion as to the cause of the vomiting and the degree of

toxemia present. I would recommend that in all cases of toxic vomiting with albumin casts the uterus be emptied as soon as the diagnosis is made.

The treatment of eclampsia is prophylactic and for the seizures. Prophylactic treatment diminishes the nitrogen intake to a minimum, improves the action of all eliminative organs, especially the bowels and skin, with mental and physical rest.

1. For the seizures, control convulsions by morphin or veratrum; venesection, if blood pressure is high, 175 mm. or over; chloral or chloroform is bad in the liver cases as it tends to increase the damage already done to the liver.

2. Elimination of the poison by prompt catharsis, sweating, dilution of the poisons by venesection, if the blood pressure is over 175; follow this by saline, intravenous or subcutaneous.

3. Empty the uterus as quickly as possible; some cases may require abdominal section.

4. Protect the patient from self-injury.

In conclusion, will say that in all probability pernicious vomiting and hepatic eclampsia arise from an unknown toxin of fetal origin, and that the early emptying of the uterus is the measure of most value to save the mother. Close watching of all pregnancies for preeclamptic signs is important, as the prompt and vigorous treatment of the preeclamptic condition will save more mothers and babies than the usual practice of seeing these patients at time of delivery only.

540 East Commercial Street.

**UNDER WHAT CIRCUMSTANCES SHOULD A
PATIENT WITH PULMONARY TUBER-
CULOSIS BE ADVISED TO CHANGE
CLIMATE***

J. W. BOLTON, M.D.

WARRENSBURG, MO.

All the knowledge we possess today or that we may acquire in the future, in the broadest sense, is what we have learned from our own experience and the recorded or communicated experience of others. The prevailing medical ideas in every community can be largely attributed to the local medical profession. It is an established fact that many laymen as a rule will use good judgment in almost everything except their own physical welfare, and yet human health is the most vital of anything that affects us. You cannot think of anything that affects humanity of whatever nature it may be that does not directly or indirectly depend upon

* Read before the Johnson County Medical Society, Oct. 2, 1917.

health, yet notwithstanding this fact we are prone to neglect it in a very large measure.

In every community we find some people who become so extreme in their views as to even deny the existence of any such thing as material disease; even denying the reality of matter itself. This delusion has and will cause many a death that could be saved, or life at least prolonged.

But, we do not have to go out of our own profession to find obsessions; the history of medicine is full of them. There is no profession that has exceeded medicine in rapid progress. The theory of today becomes the fallacy of tomorrow. One of our greatest obsessions is that of condemning those who have the courage to depart from the beaten paths. We are entirely too slow to investigate new therapeutic ideas. Individually many of us are possessed with the idea that no other doctor can do the patient any good if we can't, and we are selfish enough to want our patients to think so. This obsession is radically wrong and has cost and is costing lives. Many of us are obsessed with the idea that a change of climate is the only cure for tuberculosis. This idea has become so thoroughly fixed in the minds of some physicians that they will advise a change of climate even though the patient is almost drawing his last breath. I am sometimes almost forced to the conclusion that this is done to get rid of the patient—and they usually do. The universal prevalence and communicability of tuberculosis makes it of vital importance to the community and profession. It is up to us to say what shall be done in any individual case. You will agree with me when I say the local profession in every community has not given the attention to its treatment that should have been given. As you know, the idea among the laity is very prevalent that it cannot be cured and I am sorry to say this same idea exists in the profession in spite of the undeniable fact that the mortality has been reduced at least 25 per cent in the last few years. I have personally heard doctors make the declaration to the public that it was an incurable disease. The consensus of opinion of some of the best men in the profession now is that it is one of the most easily cured of diseases, if not too far advanced; and even in seemingly hopeless cases results are sometimes almost startling. With our latest knowledge along this line and our new, modern methods of treatment, I am compelled to conclude that it is absolutely unnecessary to advise a change of climate, providing conditions are as they should be. Tuberculous patients can be treated far more successfully and satisfactorily at home than at any other place. No well informed physician will deny the value of climatic influence on the disease.

but we must not confuse climate with fresh air. It is the fresh air and not the climate that counts. God-given fresh air is so universal that we do not have to go to some foreign locality to get it. It becomes a serious, vital reality when we are asked the question, Will I have to go to some other climate? There are so many factors to be considered that we should simply brush them all aside and tell them to stay at home, provided, as I say, conditions are as they should be. Of course, if we have a state institution and the patient's finances are such that they cannot even provide themselves for proper home treatment, then send them there. This is the only thing you can do to relieve yourself of the responsibility. These same conclusions apply to other diseases, such as hay-fever, asthma and nearly all diseases of a chronic nature. This sending our patients away from home to be treated is a reflection upon one's medical knowledge. Dr. William Donald says that incontrovertible experience has proven that many tuberculous patients do better under home treatment. The care of the family physician, care and attention of loving relations at home, is far better than treatment away from home with strange surroundings. Fresh air and proper conditions are absolutely necessary in the successful treatment of this disease. Ninety-eight per cent. must be treated at home at best.

Being largely a disease of malnutrition, the correction of this, even in a poor climate with excellent food and cheerful surroundings, is inexpressibly more desirable than the reverse. Plenty of fresh air can be obtained in almost any climate. Dr. G. L. Woods says after several years' observation and study of climatic treatment in Colorado, that the great objection to resorts is the herding of a score of patients, most of them well advanced types, with their inevitable discussion and comparison of symptoms, as a most pernicious and depressing custom. Observation of hundreds of these cases month after month forced the conclusion that many should never have been sent there, but should have remained at home, and sums up with these don'ts: Don't send an advanced case to a high altitude. Don't send an active case—one with running temperature. Don't send one who has not means to secure the proper accommodations and cannot remain indefinitely.

Dr. J. E. Stubert says experience has forced the medical profession to the conclusion that there is no specific climate required or to be found for tuberculosis, and that the majority of cures have been effected at or near their homes. The idea that it cannot be cured has no place in medicine.

Dr. M. L. Stevens says good treatment under suitable home conditions is much to be preferred to the best climate in the world without medical supervision.

Dr. Hefron says he is convinced that under favorable circumstances a tuberculous patient can recover in any kind of atmosphere if it is pure.

Sajous contends that tuberculosis is one of the most amenable diseases to proper treatment.

Dr. N. Bridge says tuberculosis requires a long continued uniform course of the best hygienic management to insure final and lasting recovery.

One of the first thoughts is, send him away. Certain climates have become in the minds of many a sure cure and that is all that is necessary. I am compelled, after abundant observation, to believe that of all the remedies for tuberculosis, climate as usually employed is the most unsatisfactory. Going away is one of the most misused of all measures. It is the management vastly more than the climate than benefits the patient. At great cost of money and trouble we have traveled thousands of miles in search of something valuable and neglected the precious thing that is always within our grasp.

Dr. G. W. Norris says patients with cavities are being cured every day; volumes have been written on climate, but experience has taught us that while certain regions may confer benefits, tuberculous cases can recover in any climate. Even in sanatoriums the daily program is far more important than any climate.

After a careful investigation of this subject and a thoughtful consideration of the various aspects of climatic treatment, I am forced to the previously expressed conclusion. Admitting the fact that the family physician is the governing factor in its treatment, this alone would prevent any other conclusion; the reasons are obvious. Our duty to these patients is plain, and I sincerely hope that more attention will be given them in the future. I am satisfied that there are physicians in Warrensburg who will agree with me from their own experience in home treatment. The mental status of the patient is one of the most important factors in the treatment of any disease and it is especially so in tuberculosis. Their surroundings should be as nearly ideal as possible, and certainly as a rule the home offers the best opportunity to secure them. In the future let us be more optimistic with these cases; show them they can be cured at home; that they do not have to go away among strangers in a strange land which compels them to make great sacrifice. Let us place ourselves in their position and then we can realize what it means to them for us to tell them they will have to change climate. If we desire to gain and retain the respect of our patients we must show them that we can cure them at home, not only of pulmonary tuberculosis but other diseases as well.

THE LOYAL DOCTOR*

E. L. RHODES, M.D.
LINCOLN

I consider it a great pleasure and honor to have served you in the capacity of president the past year. We sincerely regret that more has not been accomplished. During the existence of our society I have missed but few meetings. The first officers of this society were: Dr. G. A. Greesen, president; Dr. E. L. Rhodes, vice-president; Dr. S. O. Davis, secretary, who also was the first and only member of this society to cross the River Styx.

The success of any undertaking, as well as that of our medical society, depends on the interest and support of the members. No man, however competent, can make this society a success without the help and support of its members. We meet here today as friends of one common brotherhood. There is no calling more honorable and self sacrificing than that of a true physician. There is no other profession or vocation that has rendered or will render more gratuitous service, neither is there another profession or vocation so poorly paid.

More than forty years have elapsed since I began the study of medicine, which was before the discovery of that common and dreaded disease called appendicitis. Of course, this disease has always existed, but if any of you doctors had come to me thirty-five or forty years ago with the modern symptoms of appendicitis I would probably have diagnosed the case as typhlitis, perityphlitis, psoas abscess, intestinal catarrh, peritonitis or some other kindred disease.

The faithful physician goes forth in the discharge of his duties amid the vicissitudes of the weather, administering to the sick and dying where death walked forth unchecked.

I think it just and befitting at this time to call your attention to those members of our society who so nobly enlisted in the great world war and have gone forth in the service of humanity. I refer to Dr. J. A. Logan of Warsaw, Dr. N. A. Swald of Cole Camp, and Dr. Emil Heibner, formerly of this county.

History shows that in all wars and this war as well the medical profession has always been ready to answer the country's call to arms. We are proud to state that Benton County has already furnished two physicians.

The calling of a physician is one of service. A man often measures himself by what he has in the world, but when he comes to the end of life the world measures him by the service he has rendered. It is not that for which he exacted pay to the utmost farthing, but what

* Address of the retiring president of Benton County Medical Society, Dec. 17, 1917.

he gave without thought of reward; that is the balance he has on the credit side of the ledger. If the balance is on the debit side and he has continued to take from the community without rendering adequate service in return, he is a bankrupt no matter how many dollars he has accumulated. The service given to the community at large or the kindness he has shown the poor and the unfortunate is the permanent legacy. No monument is ever erected to commemorate what a man has succeeded in wringing out of his fellowmen. But many are the number of monuments and tablets telling of the great service given for humanity. Most great men have been poor; they have sacrificed their personal interests and often their lives for others. A great responsibility confronts the medical profession of the United States at this time, but there is every indication that the situation will be met heroically, as has always been the case in the past when the call for help has come. The doctor's profession is primarily one of service and sacrifice. He is probably the best fitted of all civilians and most willing to answer the call of his country.

The medical profession of America is well aware of the situation and every effort is being made by the medical organizations over the country to supply the necessary contingent abroad as well as to care for the work at home with all the efficiency possible. Many physicians are giving up lucrative practices to serve the nation in this great crisis.

Criminals exist in all communities; idiots are indigenous to every clime. A certain percentage of unbalanced creatures come into the world each year, and accordingly we must expect to find among our 104,000,000 people a few misguided, half-balanced creatures who are not loyal to the American flag; but with these exceptions there is no disloyalty.

The brain of America thrills with one impulse; the soul of America is inspired with one hope; the heart of America beats with one desire; the lives of America breathe but one prayer—that we may gloriously win this war and establish the principles of democracy and prove to all races, kindreds and peoples that the United States can and will defend its rights.

CONGENITAL SCROTAL ANUS*

J. R. BRUCE, M.D.,
MARSHFIELD, MO.

On Sept. 11, 1917, I was called to attend a case of confinement in a multipara, mother of three normal, healthy children; last confinement about two and one-half years ago. Was called about 10:30 p. m. and

* Read at the meeting of the Webster County Medical Society, Rogersville, Oct. 3, 1917.

was informed that the bag of waters had ruptured about 8 o'clock that evening and that she had since gone to bed and was resting very comfortably and having no pains. After waiting for about an hour I made a digital examination which revealed the os still high in the pelvis, dilated only to the size of a dime and mother apparently not in labor. After waiting for another hour and living close by I went home and told them to call me when necessary. About 12:10 she began having labor pains and after three pains at five minute intervals the baby was born; apparently a normal and healthy boy. The placenta was delivered without difficulty or hemorrhage. That evening when I called they reported all doing well but the next day they called me because the baby was vomiting bile and its abdomen was swollen and sore. To my great surprise I found that it was discharging meconium through the scrotum. This being such an unusual condition I called Dr. ———? in consultation. I made an opening into the rectum and dilated with a small rubber catheter and the meconium escaped. I kept the rectum open and the scrotum went down; vomiting ceased and the child went to nursing and is doing well. At present both orifices are open and child apparently has control over discharges at both openings. A probe inserted passed through the scrotal opening showed the canal running backward and downward into the rectum. The child is gaining every week and the picture of health. Both orifices are open and discharging.

This was a very peculiar case to me, first, because of the quick precipitant labor, and then because of this deformity.

CORRELATION OF LABORATORY AND CLINICAL OBSERVATIONS.—In the third annual report of the Medical Research Committee for 1916-1917, it is noted that a special investigation committee has been appointed for the purpose of further combined study of "Shock and the Better Correlation of Laboratory and Clinical Observations," consisting of Prof. F. A. Bainbridge, Prof. W. M. Bayliss, F.R.S.; Prof. Walter B. Cannon, Dr. H. H. Dale, F.R.S. (secretary); Lieut.-Col. T. R. Elliott, F.R.S., R. A. M. C.; Capt. John Fraser, R. A. M. C.; Prof. C. S. Sherrington, F.R.S.; Prof. E. H. Starling, F.R.S. (chairman), and Col. Cuthbert Wallace, C.B. Professor Cannon is making arrangements for coordinating the work of this committee with that of a similar committee of American physiologists. The committee in its report also expresses its gratitude to the Rockefeller Institute for Medical Research, and to Dr. Simon Flexner, director of the institute, for services rendered, and especially mentions the assistance that Professor Richards, with the sanction of the University of Pennsylvania, is giving to research work in its pharmacologic department; the cooperation of Prof. Walter B. Cannon of Harvard University in inquiring into the physiology of surgical and toxic shock; the valuable service of Professor Tileston of Yale University, and other Americans in the work at Hampstead or Colchester on cases of military heart disorder, and the collaboration of American workers in France with the committee. The committee accepts gratefully these individual acts of friendly help for American workers as an earnest of the growing cooperation between this work for the advancement of medical knowledge in the two countries, on behalf of either of them, with the allied armies in France.

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MARCH, 1918

EDITORIALS

DEHORMONIZED FOOD A PERIL TO THE NATION

In 1871, Marion Harland in the first edition of her cook book, made an earnest plea for the use of natural grain products, and in the early part of this century McCann wrote a book with the same object in view. But alas, their warnings went unheeded.

Now that we know wherein the singular powers of food lay, the vitamins, or as Lusk prefers to call them, the food-hormons, which reside in the pericarp and the germinal portion of grains and legumes, it behooves the proper authorities, wherever feasible to stretch forth a helping hand to the young of our nation.

War, the hook worm, lues, alcohol, tuberculosis, vicious birth control, and now the universal denaturing of the nation's food supply are the enemies which threaten our national existence. To meet all these the rehabilitation of the food supply by law offers the most immediate and absolute field for success. The denatured foods which give rise respectively to pellagra, beri-beri, scurvy (scurvy-rickets), xerophthalmia, and possibly cancer according to a suggestion coming from the very highest authority, are well known; but there is a necessity at this time to call attention to the food deficiencies which give rise to stunted growth in children. A food which will maintain an adult in normal equilibrium and working power may be utterly insufficient to promote growth in the young. These vitamins may be termed "Auxohormons," and their function must be supplemented by that of glandular fat and an adequate mineral formula, and by certain proteins which are not contained in adequate amount in all elementary food substances.

The retail grocer testifies that housewives will no longer buy foods which require cooking, but only those which are already opsonized; and that means that all the richer protein portions containing the vitamins must be eliminated, as a rule.

Wellman and Bass as a result of their experiments state that almost all the breakfast foods found on our tables will paralyze and kill young

birds and quadrupeds within from ten to fifty days. In the cities, most households utilize enough of potatoes and legumes, which with butter and milk are the only natural staple foods left to us to give some growth and health to the children. The foreigners in our midst eat black bread, which saves them, but the condition of the negroes on the plantations in the South, of the mountain dwellers and swamp dwellers, is truly pitiable. Providentially, the hormones are all soluble in water or oil and preservable in salt, glycerin or alcohol, and can therefore be dispensed like medicines where the food available has already been denatured.

The measures necessary for the preservation of the nation are very simple, practicable and urgent. Butter fat should be reserved for the young during war time; adults can do perfectly well on oleomargarin with sufficient butter to flavor it. The yolk of eggs is equally efficient. The grain hormones should be restored to the grain foods destined for the use of the young.

Legumes, which so far have not been denatured, are most rich in hormones and should be present in every family in the country where potatoes are not obtainable. Goat raising should be encouraged and fostered wherever the milk of cows is not available. Witness the wonderful economic and health value of these animals in so many parts of the world. It is now incumbent upon the medical societies, philanthropic agencies for children's welfare, the legislatures and the Congress, and every individual of the medical profession, to bring relief before we have a generation of stunted growth and feeble constitutions.

Let not any one think that this dangerous condition has always existed; a destruction of the vitality of the nation's food is not yet a generation old, and every day until Mr. Hoover's beneficent interference in the matter of wheat flour, the destruction progressed.

—E. W. S.

WORK FOR DOCTORS NOT ELIGIBLE TO THE MEDICAL RESERVE CORPS

There are many physicians who have tried to join the Medical Reserve Corps of the Army but were denied this privilege because they had passed the age limit of 55 years or presented some physical disability that unfitted them for the strenuous work of the army surgeon. Those physicians were keenly disappointed for in them the spirit was strong to serve their country. For all such members of the profession an opportunity will soon be presented to render loyal service to the country when the plan now

being formulated by the National Council of Defense and the Medical Section of the Advisory Commission has been completed. This plan contemplates the formation of a Volunteer Medical Service Corps composed of physicians who were not eligible for the Medical Reserve Corps to form an organization that will meet such civic and military needs as are not already provided for. The rules for the formation of this corps and application forms for membership will soon be distributed and will fully explain the object and aim of the corps whereby physicians may render voluntary service to the country whenever and wherever practicable. The Corps will respond to requests for service issued by the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service or any other duly authorized department or association. A state governing board of five members of the medical section of the state committee will have charge of the organization of the Corps in the state and pass on all applications for membership. A designated mark has been authorized so that members of this Corps can be recognized as having offered their services to our country in this time of need.

NO CESSATION OF COUNTY SOCIETY ACTIVITIES

War always disturbs the placid course of affairs in individual, communal and national life. The bigger the war the more radical the changes. The stupendous conflict now raging between the nations of the earth has left no walk in life untouched. Every individual in every community feels the blight of war's consuming fire. The ranks of the medical profession were immediately depleted by the call to arms, a call that will compel us to contribute more and more of the best men in medicine until the fight for independence, freedom and peace has been won. But there remain at home many physicians who cannot join their brothers in arms, upon whom falls the burden of keeping the spirit of medical organization alive and active and protecting the homes and families of those who are "over there." The County Medical Societies are the bright and shining light of medical progress, of health protection, and the guardians of the mental and physical welfare of the people.

The County Medical Societies should widen their scope of activities in this time of peril and join in every movement that promises to increase the strength of our armies, to allay the fears of our soldiers concerning the welfare of the dear ones left behind, and to protect the

professional and material interests as well as the families of our fellow members who have joined the colors.

We urge upon our members to take an active and leading part in promoting the sale of Liberty Loan bonds, thrift stamps, conservation of food, Red Cross and Y. M. C. A. subscriptions and all other methods indorsed by the government which will show our soldiers that the folks at home are serving too.

In the next Liberty Loan campaign each County Society should act as headquarters for subscriptions from all the physicians in the county so that the community may know that the doctors have done their share in this great work and prevent a repetition of what occurred in Kansas City in the last campaign. It happened in Kansas City that the manager of the campaign was quoted in the newspapers as saying that the physicians had not subscribed very liberally to the loan. The president of Jackson County Medical Society promptly denied this assertion and showed that the doctors had quietly proceeded with their subscriptions that totaled a much greater sum than had been subscribed by other professional and business men ordinarily reputed more wealthy than doctors.

Whenever there is an opportunity to secure a speaker from some branch of the Army the medical society should ask him to tell them about the service. In this way much information can be learned that would prove highly interesting and instructive.

The scientific work of the society should not be neglected but rather increased, and especially when there is an opportunity to discuss some of the problems of physical disability that the war has produced.

As an organization our Association starts the new year in splendid condition. County Societies are holding meetings regularly and showing a splendid spirit of readiness to grasp every opportunity for making the society more useful in their communities and more helpful to their members. That is the spirit that spells success—the spirit which permeates our membership.

SAVE THE BABIES

Any movement that will save life elicits the support and cooperation of our Association and the individual attention of every member. The fact that thousands of children under 5 years of age die annually through ignorance and neglect on the part of their parents has stimulated the United States Children's Bureau and the American Red Cross to encourage the women of the country to take a course in first aid and child welfare work, the teaching to be done

by physicians of standing in each county. In Missouri this work is to be conducted by the Section on Child Welfare, Woman's Committee of the Council of National Defense, Mrs. C. W. Greene of Columbia being the chairman of the section. Our cooperation has been invited in this great work and the Committee on Health and Public Instruction requests that the members in each county respond to the calls of the Woman's Committee.

The method of procedure is for the Woman's Committee to organize classes of women, not to exceed twenty-five in each class, who will be given instruction by a member of the County Medical Society appointed by the president of the society. Such a course was given in Columbia recently with splendid success, there being over 300 women in the classes, all of them being taught by members of the Boone County Medical Society. The work is worthy of every support the members can give it.

A RECONSTRUCTION HOSPITAL AT ST. LOUIS

The government is planning to establish several large hospitals to be located in different sections of the country where returned soldiers who are mentally and physically incapacitated may be trained to maintain themselves by performing certain kinds of work best suited to their condition. The advantages of St. Louis for the location of such a hospital have been presented to the officials at Washington by the municipal authorities who also tendered a site consisting of fourteen acres in Forest Park and adjacent to the Barnes Hospital and Washington University Medical School. The facilities of this school as also of the St. Louis University Medical School, have been tendered the government. A hospital of this nature must be located in a center of population presenting large educational opportunities and numerous facilities for the employment of physically handicapped men in a variety of occupations. St. Louis abounds in all the necessary facilities for such a hospital and the cooperation of its citizens can be relied on to assist the government in every phase of the work. The hospital will have a capacity of a thousand or more soldiers and will be maintained and directed entirely by the national government, the officers and staff being selected from Washington. If the hospital is located at St. Louis, which seems probable, it will give the medical profession a wonderful opportunity to observe some of the triumphs of operative surgery and methods of reeducation of dormant nerve tracts about which we read and hear so much.

QUOTA OF MISSOURI PHYSICIANS IN MEDICAL RESERVE CORPS COMPLETE

Missouri's quota of physicians for the Medical Reserve Corps of the Army is practically complete, if all who have received commissions have accepted them, there being at this writing 879 commissions issued. The total number for Missouri was 895, leaving only sixteen on February 1 to complete our apportionment. This number has undoubtedly been filled since February 1 because more than that number of applications have been forwarded to the Surgeon-General with recommendation that the commissions be issued.

The figures in the table published in our February number represent only the number of doctors who have received commissions for the Medical Reserve Corps of the Army and do not include doctors in the National Guard of Missouri, the Medical Corps of the Navy, nor the Medical Corps of the Regular Army, therefore some of the counties listed as having no physicians in the Medical Reserve Corps actually have one or more physicians in some branch of the service. There are other counties where doctors have made application for commissions, but were found physically ineligible. These latter counties will be given full credit when the Voluntary Medical Service Corps, mentioned in another column, has been organized.

OBITUARY

EDWIN DeWAYNE PEUGH, M.D.

Dr. Edwin DeWayne Peugh, a graduate of the Kansas City Medical College, 1895, died at his home at Brookfield, Mo., February 3, 1918, of valvular heart disease, age 44. Dr. Peugh was a member of the Linn County Medical Society and the Missouri State Medical Association.

ROBERT C. ATKINSON, M.D.

Dr. Robert C. Atkinson, for almost fifty years an active practitioner in St. Louis, died at his home December 31, 1917, from arteriosclerosis, age 76. Dr. Atkinson graduated from the medical department of Tulane University in 1867, moved to St. Louis in 1868, and was soon afterward appointed assistant superintendent of the City Hospital. During the smallpox epidemic of the early seventies he was made smallpox inspector. In 1884 he was elected a member of the St. Louis Board of Health and was Secretary of the State Board of Health in 1890 and 1891. He

served four years as a member of the St. Louis board of education and for eight years he was a member of the board of hygiene of the public schools. He resigned from this board in 1916. At the time of his death he was medical director of St. Ann's Foundling Asylum. He was a member of the faculty of the Marion-Sims Medical College, holding the chair of diseases of children, and retained this position when the college was absorbed by the St. Louis University. In 1912 he resigned that position. Dr. Atkinson was a very active member of the profession, not only in medical circles but in public health work. He was one of the few Honor members of the St. Louis Medical Society and enjoyed the confidence and esteem of the whole medical profession and was greatly loved by a wide circle of friends.

WILLIAM S. DEUTSCH, M.D.

On October 9, 1917, Dr. William S. Deutsch joined the ranks of the silent hosts. The deceased was too well and favorably known among the members of the profession which he adorned to suffer him to go to his long home without notice.

He was born in St. Louis, May 19, 1871, and was the son of Prof. William Deutsch and Pauline Tuholske Deutsch, his mother being a sister of Dr. Herman Tuholske. His father made a name for himself as one of this city's most capable teachers. Dr. Deutsch was educated in the public schools of St. Louis and after graduating from high school he entered on the study of medicine as his life work. He received his M.D. degree at the Missouri Medical College in 1892. He served one year as interne in the St. Louis City Hospital and thereafter, for several years, he discharged the duties of resident physician in the surgical hospital of Dr. Tuholske. On Jan. 4, 1899, he married Estelle Hirsch of Richmond, Va., in whom he found a congenial and most faithful companion. In 1903 he became assistant in surgery at the Washington University Clinic, and in 1908, his ability having been recognized, he became associate chief surgeon of Washington University.

He was one of the charter members of the Surgeon's Club, also a member of the A. M. A., St. Louis and other medical societies. Being a true American patriot, he was a first lieutenant in the Medical Reserve Corps, U. S. Army, and as one of his older and most scholarly colleagues said of him, he was always faithful and ready to serve.

Dr. Deutsch will long be remembered within the circle of his friends as one who was always loyal, a faithful servant and a lover of his kind.—*Bull. St. Louis Med. Soc.*

JULES F. VALLE, M.D.

Dr. Jules F. Valle was born in St. Louis Dec. 28, 1859, and died in this city Nov. 24, 1917. His early education was in the schools of St. Louis and in Virginia at the Staunton Military Academy and later in Connecticut. His medical degree was taken at the St. Louis Medical College, where he graduated in 1885, afterward serving an internship in the St. Louis City Hospital. Postgraduate courses were taken in European clinics, where he spent three years in study. He was a member of the teaching corps of the St. Louis Medical College and later of the Medical Department at Washington University, teaching obstetrics and gynecology. He was also on the visiting staff of St. Luke's Hospital and the State School for the Blind, and was a member of the St. Louis Medical and the St. Louis Obstetrical and Gynecological Societies, and of the Medical Society of the City Hospital Alumni.

Dr. Valle was married before he received his medical degree to Miss Mary M. Clover of St. Louis, whose death preceded his a few years. They are survived by three children—Mrs. Charles A. Leonard of Pittsfield, Ill., Mrs. Hope-Nelson of England, and Jules F. Valle, Jr., of St. Louis.

Dr. Valle was a gentleman of the highest culture and of a most pleasing personality. Of marked literary tendency, he was constantly adding to his store of knowledge by earnest and extensive reading, making him a conversationalist of unusual attractiveness and force. He was a physician of recognized ability. In his relation to his clientele he was thoughtful, kindly and effective. In counsel with his fellow practitioners he was always courteous and helpful, commanding and holding their fullest confidence and esteem. In his life Dr. Valle exemplified the beauty of the relation that should exist between the physician and his client. From him there constantly emanated the influence of those attributes that characterize the gentleman of refinement and force. With these attributes he was peculiarly and richly endowed.—PAUL Y. TUPPER, in *Bulletin St. Louis Medical Society*.

ROBERT S. PHILLIPS, M.D.

Dr. Robert S. Phillips was born near Elkin, Surry County, North Carolina, October 26, 1844, and died in Clinton, Missouri, Hospital, December 18, 1917, of uremic poisoning, following an operation four days before. He thus lived to the age of 73 years, 1 month and 22 days.

At the age of 18 he enlisted in the Fifty-fourth North Carolina regiment and joined General Robert E. Lee's army. He partici-

pated in a number of important engagements and was captured at Fort Steadman in 1865, remaining in prison until after the close of the war. In 1867 he entered Elk Creek Academy at Elk Creek, Virginia, and completed his course in 1870, working for his board and saving during the summer months, after which he emigrated to Missouri. For several years he taught school in Arkansas and in 1876 commenced "reading medicine" with Dr. Hickerson of Valley Springs, Arkansas. In 1877 he matriculated in the University of Michigan, from which he graduated in medicine in 1881. He began practice in Clifton City, Cooper County, Missouri, in 1882, but later settled in Garland, Henry County.

Nearly every one in that section of the country knew Dr. Phillips and his big sorrel horse "Harry." His devotion to this horse was such that he kept him until he died and had his grave fenced in. Until his last days he averred that he would rather have "Old Harry" than any automobile manufactured. During his residence in Garland he was a member of the Henry County Medical Society and frequently favored that society with interesting articles based on cases with which he met in his country practice.

In 1897 he returned to Spring City, St. Clair County, and retired from active practice. He retained, however, a lively interest in medical science and was always devoted to his profession. He is survived by his wife and four children.

—A. N. L.

FLAVEL B. TIFFANY, M.D.

Dr. Flavel B. Tiffany was born in Oneida County, New York, April 28, 1846. When but a few years old he was taken by his parents to the frontier state of Wisconsin, where in his early years he lived in a log house and attended country schools for some years. He entered the University of Minnesota, from which institution he was graduated in the late sixties. In 1874 he was graduated from the medical department of the University of Michigan, after which he practiced in East St. Louis, Ill., and Medford, Minn., together with the time spent in postgraduate work in Berlin, Vienna and Leipzig, until 1878, when he came to Kansas City, where he lived and practiced his specialty until about a year ago, when his health failed him. In 1881 he helped to organize the University Medical College, which for many years was one of the leading medical colleges in the West. In this school he was professor of ophthalmology and otology until it closed some half dozen years ago. Dr. Tiffany was one of the organizers of the Jackson County Medical Society in 1881 and his death has now thinned

the number of charter members to six. He was a member of the A. M. A., the Missouri State Medical Association, Missouri Valley and Mississippi Valley Medical, Southwest, and Southern Medical Associations.

Dr. Tiffany was the author of "Diseases of the Eye, Anomalies of Refraction and Accommodation."

Dr. Tiffany led a busy life and professionally had a large clientele. Besides his activities in his profession he was a lover and patron of art and music. Some of the most enjoyable occasions and gatherings where high class music talent was fostered and encouraged in the last forty years in Kansas City were fostered by Dr. Tiffany.

His death, which occurred January 4, 1918, leaves his widow, Mrs. Zoe Clarke Tiffany, and two small boys to mourn their loss and this society now expresses to them its sincere and deep sympathy in this their sorrowful affliction.

H. B. COLEMAN.

JOKSHAN FREYMAN.

R. E. CASTELAW.

—*Bull. Jackson County Med. Soc.*

HUGO SUMMA, M.D.,

AS A PUPIL KNEW HIM

WILLARD BARTLETT, M.D.

The shadows of the winter afternoon were lengthening December 15, 1917, when Hugo Summa passed quietly into the sleep which is endless. Had he lived but two more days he would have completed an all too short life of fifty-eight years.

Born in lazy-going Bavaria, land of rugged, wholesome music and art-loving people, he never could get the Prussian point of view. Soon after the completion of his medical studies at Munich and Freiburg he came to America in the fall of 1885. No time was lost, a matter of moment in this present crisis, in becoming an American citizen—not a mere formality with him as is well known to all who ever heard him discuss the kaiser. Always intensely patriotic, he never failed to manifest his sympathy for the kindly people with whom he had been reared in what he considered their betrayal by the bland, Northern neighbor.

His marriage in 1887, to Miss Hansi Rooch, daughter of a North St. Louis physician, was blessed by the advent of two children, Misses Edna and Irma, now young women, possessing the strength and training which enables them to lighten the mother's load of sorrow.

Dr. Summa's widespread influence on the medical profession of this and neighboring states began in 1887, when he joined the faculty

of the College of Physicians and Surgeons, thus associating himself with Louis Bauer, Augustus C. Bernays and other brilliant minds of that time. Four years later he went over with others to the Marion-Sims College of Medicine, when in 1892 the writer first had the privilege of listening to the brilliant young teacher of pathology and internal medicine. I am not alone in saying that I never knew his equal as a "school-master;" he possessed that rare ability to impart what he himself knew, to make it easily understandable, and to emphasize the salient features of it in a manner not to be forgotten.



HUGO SUMMA, M.D.

As long ago as 1893 he extended to a few of us during vacations the privileges of a perfectly appointed diagnostic laboratory. It was here that our well-remembered Jesse G. Meyer began the development which made him so thoughtful and skilled a diagnostician. None of those favored ones will ever forget how Dr. Summa utterly forgot the commercial side of medicine in giving unlimited time to an interesting case, or one which baffled solution, while the crowded waiting room overflowed into adjoining halls and entryways; all of this at a time when the laboratory was a rare adjunct to private practice in the Middle West.

For several years in the nineties he served as city pathologist here with no other recompense than that which comes from a sense of having

lived up to one's ideals. Those who frequented the old city hospital dead-house in those days had vividly impressed on them the true value of morbid anatomy to one who hopes for an understanding of pathology and its interpretation into terms of clinical medicine. How well remembered is his favorite aphorism at the autopsy table, "The diagnoses fall like ripe fruit into the lap of him who is really versed in pathology and pathologic anatomy."

Dr. Summa remained with the St. Louis University Medical School as Professor of Internal Medicine until 1910, by which time he found himself unable to do what he considered his duty by his teaching as well as by a consulting practice which embraced all the neighboring states and some of those more remote in the West, South and Southwest. No sketch of his medical life can be termed at all complete which does not touch on the peculiar fascination which he exerted over his patients. It must have been the result of the confidence which he inspired in his clinical ability, for he was seldom gentle in his manner toward them, being, I might better say, masterful at all times, even now and then approaching the tyrannical as nearly as was possible to a thoroughly kind-hearted man.

He was a constant student, a logical thinker, a close observer, and given to processes of deduction which led almost unerringly to results that were sometimes startling. He greatly revered the diagnostic ability of von Leyden, who, he was fond of saying, seemed to look through the human body as though it were made of glass! Surely more than one of his hearers must often have thought this really distinguished compliment applicable to Summa as well.

One of his leading characteristics was optimism, and so infectious was the quality in him that it very readily communicated itself to his patients. No matter how serious the condition, or how hopeless the eventual outcome, the patient, after he had seen Dr. Summa, never failed to take a new hold on himself and a firmer grasp on the slender thread of life. This was carried so far that those not fully informed of the situation might have thought the Doctor sometimes in error as to a prognosis. But this could have been rarely the case, in view of his highly scientific attainments, and especially when one considers that he always laid particular stress in his medical teaching on the value of the prognosis, saying that it alone proved, as far as the laity are concerned at least, the correctness of a man's reasoning.

He was of a particularly sensitive disposition; in fact, one might be justified in saying that he was almost abnormal in this particular. I am sure that this led to the fact that the innate kind nature of the man did not always appear on the surface, and that his goodness of heart

was known and understood only by those who knew him well. In his earlier teaching years this quality of sensitiveness led him to be unusually careful of the English language. He never delivered one of his medical lectures at this time without first having his devoted wife hear and criticize diction and delivery. All who have conversed with him will remember that a very pleasant foreign accent rather emphasized than obscured the exquisite choice of English which he usually made. It was only under stress of excitement that the idioms of his mother tongue, now and then, came to the surface.

His devotion to the highest possible ideals of thought and practice was an everyday matter to his intimate friends. This trait occasionally led him into the most ludicrous predicaments. I remember on one occasion, many years ago, at a meeting of the St. Louis Medical Society, an incident of this kind which startled everybody and almost broke up the meeting. A surgeon, whom Dr. Summa did not consider quite competent for the task he had undertaken, exhibited a specimen, described an operation which had terminated fatally, and then asked if any of the members could suggest what had killed the patient, whereupon Dr. Summa, trembling with excitement, rose to his full height, and pointing his finger at the colleague, shouted in a voice he could hardly control, "You have murdered that man." I believe it needs no comment of mine to prove that no one but a man of earnest conviction would risk the consequences of a remark like this in public. As long as I knew him, I never heard him say anything of the kind *behind a man's back*.

His great interest in younger medical men was a matter of common knowledge fifteen to twenty years ago. A little group of us, his disciples of that day, used to meet at his residence one evening in the week and there were permitted that intimate association with him which a few men will treasure as one of the choicest and most valuable recollections of their medical careers. I do not believe the men of our generation knew Dr. Summa as he was at that time, before his ill health began and when he still had some time which he could call his own. I could relate a number of his benefactions, if I thought a recital of them had even been intended for the public gaze. One of them, however, must not be omitted. A young man had just finished several years of postgraduate work in German universities, and upon his return to St. Louis was strongly advised by his former teacher to engage in a limited specialty. On his replying that he would certainly starve if he tried it, the Doctor assured him, in no unmistakable manner, that he would not want for three meals a day as long as the Summa home remained open. There is no mistaking

the impulses of a heart which is situated very near the pocketbook.

It may surprise many of his colleagues to learn that Dr. Summa enjoyed a number of diverse nonmedical interests. He was a music lover and indeed a musician of no mean ability. He played the cello extremely well for an amateur, and for many years conducted a string quartet at his residence where we, his next-door neighbors, learned to know Beethoven and the other classical composers through the enjoyment of frequent and delightful rehearsals. He was an absolutely regular attendant with his family at the symphony concerts. As far as I knew, he never missed a performance of grand opera given in St. Louis or in any other city where he happened to be at the time. His musical library formed a rather considerable part of an enormous private collection of books which he accumulated during his active years. He was a very ardent admirer of oil paintings and gathered quite an interesting although not a very large collection. His interest in this direction was not for the impressionist, the cubist or the other fin-de-siecle creations of doubtful value, but he loved what was standard and of his own generation. For many years he had been a stamp enthusiast, and only a few days before his death had rearranged what I believe to be one of the largest local collections.

It is too bad that he could not have given more time to a pursuit in which he delighted, viz.: rustic life on his estate at Arcadia, Mo. It may be that the outdoor, care-free existence to which he had planned to retire might have prolonged his days had it been judiciously mixed with the professional cares of recent years.

The details of his illness are probably too well known to justify extensive mention here. He always thought that he had a congenital heart lesion and indeed was at one time exempted from service in the German army although later accepted for the medical corps. It seems quite reasonable that the cardiovascular-renal disease which led to his death might well have had its beginning in a suppurative cellulitis of the nose in 1892, when he was treated by his friend, Dr. Bernays. In 1902 Dr. Goldstein and I cared for him during a similar infection. I remember distinctly how the thought of its possible consequences worried him at the time, but it was not until 1909, when his pupil, Dr. Meyer, treated him for an unexplained epistaxis and found an increased blood pressure, that we really considered him anything but a man in robust health.

Through all these years he remained very active and highly efficient, and it was not until New Year's Eve two years ago that an attack of grippe ushered in the last phase of his malady. He worked every day for nearly three months, or until Dr. Scholz was called to treat

him for another violent nose bleed, at which time Dr. Schreiber discovered a systolic blood pressure of 250; the knowledge of this naturally depressed him greatly, but in May, 1916, he made a trip to California, where he consulted his friend Abrams, and appeared to be somewhat better on his return, after about three weeks' absence. Matters went on from bad to worse until July, some two months later, when the real break occurred suddenly, after which the succeeding nine months were spent at his home in Arcadia, in St. Louis hospitals, and in California.

Late in the spring of 1917 he was sufficiently recovered to work a day or two every week in his office. This continued until the early fall, when by a supreme effort he forced himself to keep daily office hours, and although it must have cost him an effort of which only the truly brave are capable, he kept this up until the day of his death.

Dr. Summa believed that immortality consisted in a man's perpetuating himself through the examples of the teachings which he hands down to the succeeding generations. He did his share. How fitting it would be if only the pupils were always worthy of such a master!

The following are a few of Dr. Summa's writings:

"Pathogenesis of Gall-Stones," St. Louis Medical Review, Dec. 8, 1900.

"The Pseudo-Parasitism of Diptera in Man, or Myiasis," St. Louis Medical and Surgical Journal, April, May, June, 1889.

"Ueber Degenerative Veränderungen im Rückenmark bei Chronischer Lungenschwindsucht." Freiburg in Baden. Buchdruckerei Hch. Epstein, 1891.

"The Influence of Medicine on Human Culture." Medical Mirror, January, 1890.

"Typhoid Fever and the Soil," Medical Fortnightly, Feb. 1, 1893.

"On Xerostomia," The Alienist and Neurologist, April, 1890.

NEWS NOTES

BUCHANAN COUNTY Medical Society dedicated its service flag February 20. The flag was donated by Dr. Charles Wood Fassett, and contains twelve stars.

Dr. C. R. Woodson of St. Joseph suffered a very acute attack of illness recently which gave his physicians very great concern. He has recovered from the dangerous aspect and is convalescent.

LIEUTENANT FORD A. BARNES of Thayer, who was a member of the Medical Corps of the National Guard, on service at Fort Riley, has received an honorable discharge from the Army.

Dr. W. B. Post of Carthage was recently commissioned a captain in the Medical Reserve Corps and on January 20 was ordered to Camp Doniphan to take up his army duties.

MAJOR OLIVER C. GEBHART of St. Joseph, Director of Field Hospitals of the 35th Division, National Guard, and Lieutenant O. A. Schmidt, also of St. Joseph, were at home on furlough for a few days during February.

Dr. R. C. Strode of Mexico was painfully injured February 8 by being thrown from a buggy in which he was riding when the team became frightened and unmanageable.

Dr. C. A. LUSK, First Lieutenant in the Medical Reserve Corps, who was stationed at Camp Funston for several months, has been transferred to Camp Doniphan. He stopped at his home in Butler for a few days on his way to his new post.

JACOB STENZEL, the murderer of Dr. Frederick L. Pohlman, a member of the St. Louis Medical Society, was convicted of murder in the second degree in the criminal court of St. Louis, February 19, and sentenced to ten years in the penitentiary.

Dr. T. J. RIGDON of Kennett has been appointed county coroner by the Dunklin county court to fill the vacancy caused by the resignation of Dr. E. F. Harrison, who has been ordered to military duty at Fort Riley, Kansas.

Dr. R. C. FORSYTH of Kirkwood suffered a very serious loss when his home was burned and almost entirely destroyed, February 11. The fire occurred in the early morning hours and allowed the family no opportunity to rescue any effects. The home was valued at \$20,000.

A MAN married his mother-in-law and then claimed exemption from the draft because she had a weak heart. The draft board must have decided that the cardiac disturbance was purely emotional in the lady who had accomplished a feat so antipodal to the experience of most mothers-in-law. The fortunate gentleman was placed in Class 1a.

ON February 1 the Secretary of War instructed the Chief of Staff to issue orders to all division and post commanders to make a rigid inspection of hospitals connected with the camp or post. If conditions are discovered that need attention beyond the immediate command of the officer detailed to make the inspection, the commander is required to report them to the Chief of Staff for the attention of the Secretary of War.

J. W. BRADLEY, an attendant at State Hospital No. 4, Farmington, attacked and beat one of the inmates recently. Dr. J. L. Eaton, Superintendent of the Hospital, immediately discharged Bradley and had him arrested on the charge of assault and battery. He was found guilty by the court and fined.

A suit for alleged malpractice against three of our members in the southeastern part of the state, sued jointly, was decided in favor of the doctors. Another case in the same section of the state was dismissed on motion of the doctor's attorney when the plaintiff failed to file a bond for costs as requested by the attorney and ordered by the court.

MAJOR FRANK BILLINGS, M. R. C., professor of medicine in the University of Chicago, has been assigned to the Provost Marshal-General's Office, Washington, D. C. It is understood that Major Billings' work in Washington will be that of adviser to the Provost-Marshal, in connection with the medical problems under the Selective Service Law.

The St. Louis Medical Society has been requested by a representative of the Secretary of the Treasury, Mr. McAdoo, to take charge of the solicitation of physicians in St. Louis in the next Liberty Loan campaign. The society has accepted this responsibility and appointed Dr. H. W. Soper chairman of the committee to conduct the campaign among doctors.

Jackson County Medical Society has adopted a plan for caring for the practices of their members who have joined the Medical Reserve Corps. The members of the Jackson County Medical Society will refund to the absent members or to their families $33\frac{1}{3}$ per cent. of the fees collected from patients of members of the Medical Reserve Corps.

DR. MARTHA M. BACON of Kansas City has been recommended by the National Woman's Hospital Association for x-ray service in connection with war needs. Dr. Bacon is probably the only woman roentgenologist in Kansas City and among the few women in the country who have taken up this specialty. She is a member of the Jackson County Medical Society.

NOT even the king of Great Britain can escape the pinch that famine brings during war times. On February 25 London was put on rations for meat, sugar and butter, and the sale of these articles limited to a shilling's worth, and then only on presentation of a "food card." King George will probably enjoy the thrill of having his "meal ticket" punched if the experience does not last too long.

CALIFORNIA'S medical practice act has been pronounced constitutional by the supreme court of that state. The decision was made in the case of two members of a religious sect who claimed that the law was discriminatory against them because they practiced the art of healing by prayer. The law requires all who engage in the practice of healing the sick to be licensed and regulated by the state board of medical examiners.

THE attorney-general of Ohio recently delivered an opinion based on the Ohio Medical Practice Act that osteopaths are not practitioners of medicine, nor physicians, nor surgeons, but licensed to practice the limited branch of medicine known as osteopathy. For this heinous offense, the *Journal of the Ohio State Medical Association* tells us, the osteopaths are highly incensed and are threatening to take concerted action to defeat the attorney-general if he becomes a candidate for reelection.

Dr. Edward Richter of St. Louis, a member of the St. Louis Medical Society and alderman from his ward, has introduced a bill in the board of aldermen to prevent the abuse of charity in St. Louis. The bill requires all persons who apply for assistance or treatment at any of the city institutions or to any private individual or agency, to make a statement of his social and financial condition on blanks provided by the city. The bill follows closely the provisions of the New York City law. The St. Louis Medical Society has indorsed the measure and will work for its passage.

THE Greene County Medical Society, at its meeting of February 22, was presented with a service flag containing eleven stars, representing the members of the society who are in the Medical Reserve Corps of the Army. Attorney Perry T. Allen in his presentation speech commended the physicians for their loyalty in sacrificing a good practice to accept the fortunes of war. Dr. William Smith, a pioneer member of the society, delivered the speech of acceptance. Dr. C. B. Miller, pastor of the First Baptist Church, made a patriotic address which was followed by a banquet tendered the members and guests at the Physicians' Club.

A RESOLUTION introduced by Dr. Joseph W. Love of Springfield at a special meeting of the Greene County Medical Society, February 22, indorsing the Owen Bill to increase the rank of doctors in the Medical Reserve Corps of the Army, was unanimously adopted. The resolution follows:

Resolved, That the Greene County Medical Society, assembled in regular session, most heartily approves of the provisions of the Owen bill, known as Senate

Bill No. 9563, lately introduced in the Congress of the United States, and that we earnestly recommend the early passage of the bill. Be it further

Resolved, That a copy of this resolution be forwarded to each of our senators from Missouri and to our representative in Congress from this district, urging them to vote for the passage of the bill.

Do NOT neglect our advertising pages. When you are in need of something and are about to look for a reliable firm, turn at once to the advertising pages of your own JOURNAL. If you find the article among our pages you know that it has been approved by the Council on Pharmacy and Chemistry if it is medicinal or if not that it has a good reputation to maintain and therefore deserves your confidence. The advertiser in our JOURNAL, as in all state journals, has complied with every requirement that the organization has established and therefore to give your preference to these firms is a proper courtesy and acknowledgment of cooperative service. In this issue we present the announcement of two new patrons of our advertising pages: the Hebe Company, manufacturers of an evaporated milk, and the Diarsenol Company, presenting diarsenol for the treatment of syphilis. When writing to advertisers you will confer a great favor on the advertiser as well as establish your identity with the organization by mentioning our JOURNAL.

FROM the Annual Report of the Surgeon-General of the United States Public Health Service for 1917 we learn that the service received authorization to construct and outfit a laboratory car. "This car," says the report, "which is a remodeled Pullman, consists of a completely equipped field laboratory, adequately provided with every appliance for routine bacteriological investigation. The car also contains an office, officers' and attendants' sleeping quarters and toilet rooms, and a kitchen and dining room. It is lighted by electricity, which also furnishes energy for driving fans and for heating an incubator. The car was named the interstate sanitary car 'Wyman,' in commemoration of the late Surgeon-General Walter Wyman, and was placed in commission March 20, 1917, the personnel consisting of a medical officer in charge, a sanitary engineer, clerk, cook and laboratory attendant. The first trip of the interstate sanitary car was through the greater part of the State of Michigan. In this state the sources of eighty-one water supplies were surveyed, the necessary bacteriological examinations performed and certificates issued covering the quality of these supplies. From Michigan the car proceeded through Wisconsin to Chicago, where it was inspected by the Association of Railway Chief Surgeons. It then traveled through Illinois and Indiana, the same line of investigations being conducted, until called to

the Great Lakes Naval Training Station the 12th of June, where it was used in the control of an outbreak of epidemic cerebrospinal meningitis."

Aside from the interest attached to the innovation, which will extend the usefulness of the public health service very widely, Missouri physicians will take pride in the knowledge that the name of Dr. Wyman has been thus commemorated.

MEMBERSHIP CHANGES, FEBRUARY

NEW MEMBERS

James B. Bird, Kansas City.
 Scott Cook, Quin.
 John F. Cromley, Lamar.
 Joseph M. Edwards, Fairfield.
 Wm. Walker Farris, St. Louis.
 Eugene N. Frakes, Harrisburg.
 James A. Gray, Watson.
 George W. Lott, Westboro.
 Wilbur F. McConkey, St. Louis.
 Chas. C. Parmer, Centralia.
 Edgar E. Pickens, Kansas City.
 Wm. Geo. Safford, Tarkio.
 Dan G. Stine, Columbia.
 Geo. C. Trawick, St. Louis.

CHANGE OF ADDRESSES

Harry E. Bundy, St. Louis to Chicago.
 O. T. Cohen, Linneus to Malden.
 J. S. Forsen, St. Joseph to Alliance, Nebr.
 H. W. Ford, Middleton to Tulsa, Okla.
 Albert N. Gray, Maryville to Burlington, Kans.
 Chas. Lewis, 1312 Monroe to 1502 St. Louis Ave., St. Louis.
 J. H. Nixon, Chicago to Springfield, Mo.
 T. C. Piles, Ellington to Thayer.
 C. S. Roberts, Boonville to St. Joseph.
 Wm. A. Sibley, Owensville to Far River, Okla.
 Geo. W. Smith, 503 Bryant Bldg. to 520 Chambers Bldg., Kansas City.
 Kate C. Spain, 5706 Etzel to 5264 Page Blvd., St. Louis.
 E. F. Weir, Purdin to Meadville.
 J. C. Welch, Jefferson City to Salem, Mo.

TRANSFERRED

A. E. Everett, St. Louis, Tr. to Granite City (Ill.) Society.
 W. L. Whittington, St. Joseph, Tr. to California Society.

REINSTATED

Geo. W. Joiner, Lawton, Okla.

DROPPEE

Kimball Hill, Eldorado Springs.
Isaac F. Marquis, Cedar Springs.
Roy J. Owens, Leeper.
Elton S. Smith, Stockton.

EXPELLED

A. D. Craig, Lamar.

DECEASED

A. W. Fleming, St. Louis.
Edwin DeW. Peugh, Brookfield.

CORRESPONDENCE

HAS ACCEPTED COMMISSION

LEMONS, Mo., January 28, 1918.

To the Editor:

Your request in THE JOURNAL for any corrections or additions to your printed roll of Missouri physicians who are members of the Medical Reserve Corps prompts me to mention my name as one which has not appeared thereon.

I received a lieutenant's commission September last, but to date have not been called to active service.

Yours very truly,

B. E. COBB, M.D.

MISCELLANY

MISSOURI PHYSICIANS EXAMINED FOR COMMISSIONS IN MEDICAL RESERVE CORPS

We publish below the names of physicians who have applied for membership in the Medical Officers' Reserve Corps since the last list was published in our February number. We will appreciate information from any members who discover errors in these lists. We know the list is not complete because we have been unable to obtain the names of physicians examined by some of the examining boards but we are doing the best we can to give prominence and honor to the physicians of Missouri who are responding to the call of the country in the present crisis. Not all the physicians named in these lists have been commissioned as some have been rejected for physical disability and for other reasons. We believe, however, it is proper and right that we publish the names of all who apply whenever we can obtain the correct information. We cannot give the present addresses but we are making an effort to send THE JOURNAL to those who enter the service as soon as we learn their location and will change the address of THE JOURNAL as often as the officer is moved from one station to another. The list follows:

- | | |
|----------------------------|------------------------------|
| Cohen, Oscar T., Malden | Munn, Wm. E., Pure Air, |
| Dean, Joseph W., Pond, | R. D., Novinger |
| R. D., Centaur | Presnell, Geo. W. H., Sikes- |
| Dodson, J. T., Kirksville | ton |
| Malley, John A., Monroe | Reilly, Wm. S., St. Louis |
| City | Rosson, James K., Pascola |
| McCubbin, James B., Fulton | Visgird, John J., St. Louis |
| McCann, Peter J., Augusta | Wilson, John M., Stoutsville |

HEALTH CAMPAIGN IN AREAS AROUND TWENTY-EIGHT MILITARY CAMPS

The United States Public Health Service is at present carrying on an active campaign along sanitary lines in the areas adjacent to twenty-eight military camps and cantonments throughout the country. Complete sanitary organizations, composed of personnel supplied by the Public Health Service, the American Red Cross, and State and local health authorities, are at work in these areas for the purpose of preventing the spread of disease from the civilian population to military forces, and to protect the civil populations from communicable diseases where they have occurred among troops.

The sanitary organizations include physicians, sanitary engineers, sanitary inspectors, public-health nurses, attendants, and laborers. Measures undertaken include medical inspection of schoolchildren, inspection of all establishments handling food supplies, inspection of barber shops, purification of unsafe or questionable water supplies, installation of sanitary methods for the disposal of waste, and drainage or filling of mosquito-breeding places.

There is engaged in this work a force of approximately 440 employees of the Public Health Service, comprising 50 commissioned officers, 50 acting assistant surgeons (noncommissioned medical officers), 65 scientific and technical assistants, and 275 other persons, including public-health nurses, sanitary inspectors, clerks, stenographers, laborers, etc. The Red Cross has furnished 177 scientific and technical assistants, nurses, inspectors, etc., and over 200 laborers to assist in the campaign.—*Official Bull. of U. S.*

MILITARY MEDICAL RESEARCH IN FRANCE

UNDER THE RED CROSS WAR COUNCIL

The American Red Cross reports that the War Council has appropriated \$100,000 for general military medical research work in France, including special methods of recognition and study of diseases among soldiers. This action followed a report from the Red Cross Commission in France to national headquarters.

The committee in charge of this research work in France, headed by Dr. W. B. Cannon, professor of physiology at Harvard, includes:

Dr. Blake, Dr. Crile, Colonel Ireland, Dr. Alexander Lambert, Dr. Richard P. Strong, Dr. Kenneth Taylor, Dr. W. B. Cannon, professor of physiology at Harvard; Dr. Harvey Cushing, professor of surgery at Harvard; Dr. James A. Miller, professor of clinical medicine at Columbia; Dr. William Charles White, associate professor of medicine at Pittsburgh, and Dr. Homer F. Smith, professor of medicine at Cornell.

The question has been raised as to whether the appropriation for medical research was not outside the proper scope of Red Cross activity.

The answer is simple. The supreme aim of the Red Cross is to relieve human suffering growing out of war. The War Council was advised from the ablest professional sources available that an immediate appropriation for medical research would contribute toward that end. The War Council could not disregard such advice.

There are many unsolved medical questions of great importance in this war. Numerous problems relating to the treatment of wounds, the eradication of lice, fleas, and scabies, the treatment of trench nephritis, trench heart, war neurasthenia, exhaustion, lethal gases, shell concussion, wound infection, compound fracture, and a great variety of other diseases and injuries are still to be worked out. The solution of such problems will contribute not only toward the

relief of suffering but toward more effective prosecution of the war. Scientific experience is conclusive that the most rapid possible approach to such solution is through medical research.

To safeguard expenditures under this appropriation it has been arranged that all applications for grants from it shall be made through the chief medical officer of the American Expeditionary Forces, Brigadier-General A. E. Bradley, and such recommendation is essential to consideration of such expenditure.—*Science*.

FLIERS AT THE FRONT ARE BADLY HANDICAPPED

Hardly a day passes but there is some fresh illustration of the inability on the part of governments to buy with money something essential for war preparation. We are now discovering that there is not linen enough in the world to cover the acroplanes that the allies are producing. The English government has just decided that at least 10,000 acres of English soil must be devoted to the production of flax, instead of food. That government is making terms with the farmers, which will lead to the planting of that crop.

The illustrations are endless of the fact that there are not labor and materials enough to produce the things that the people want and the things that the government wants. There are two ways of helping solve the problem. One is to speed up production and industry. The other is to cut down unnecessary consumption. By the latter method every one can put himself in an effective way in a front trench. Every one can make sacrifices that will be reflected in a quicker and better equipment of armies. The progress that can be made by speeding up production can be exceeded many fold by the effect which can be produced by a whole nation making up its mind really to help win the war. The difficulties of equipping the Army would be easily cut in half if every individual in this country would recognize his responsibility in helping to equip the Army, his responsibility to get on without demanding new things he can get on without, and by so doing leave a greater amount of labor and material to produce the things the government must have.

Every yard of linen that is bought from today on puts the buyer in direct competition with the Aeroplane Board in equipping the fleet of aeroplanes which we hope to put over the German lines. That should be very plain to every one when it is known that the need of linen for aeroplane production exceeds the total stock there is in the world. But the same rule applies in almost every direction that we turn.

There can be only two reasons why men should not see in their personal expenditure their individual responsibility for equipping the army. One is a belief that a fully equipped American army is not going to be necessary; that the war either will be won by our allies, or it has already been won by the exhaustion of our enemies. There is little in the situation on which to base such a belief. The other reason must be that people believe that there are labor and materials enough to produce everything that they want for their individual uses and everything that the government must have. Absolute blindness to what the total is when you add two and two is the only excuse there can be for believing there are labor and material enough for the individual comforts and military needs of the country. The man who is not prepared to economize today either believes there is no necessity for military preparedness or he will not look in the face the plainest facts in regard to industrial capacity. The government has provided the easiest possible road for the individual to turn his personal sacrifice into patriotic aid—save and buy War Savings Stamps.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.
 Carter-Shannon County Medical Society, Jan. 9, 1918.
 Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.
 St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.
 Henry County Medical Society, Jan. 24, 1918.
 Moniteau County Medical Society, Jan. 28, 1918.
 Camden County Medical Society, Feb. 1, 1918.
 Scott County Medical Society, Feb. 2, 1918.
 Clark County Medical Society, Feb. 8, 1918.
 Cooper County Medical Society, Feb. 13, 1918.
 Atchison County Medical Society, Feb. 18, 1918.

ST. LOUIS MEDICAL SOCIETY

Meeting of the Council, January 9

The meeting was called to order at 8:45 p. m., by the chairman, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

The secretary read a letter from Dr. Harold F. Ohrt stating that he had joined the Detroit Medical Society and wished to cancel his membership in the St. Louis Medical Society. In view of his delinquency it was moved that his name be dropped from the membership list. Carried.

A letter from the Women's Committee of the Council of National Defense requesting men to address the soldiers at Jefferson Barracks on hygiene and the care of one's health was read and referred to the health and public instruction committee.

A letter from the aviation department of the Women's Home Guard was ordered filed.

A letter from the City Plan Commission was read, requesting the cooperation of the Society in its plan to regulate the height, use and area of buildings in the city of St. Louis. This letter was referred to the health and public instruction committee.

A letter from the St. Louis Provident Association requesting permission to address the Society on the crisis St. Louis is facing on account of war conditions was read and referred to the program committee with instructions to invite Mr. C. M. Hubbard, secretary and general manager of the Provident Association, to make a short address.

A letter from Dr. F. C. Ameiss expressing his thanks and appreciation for the honor the Council conferred on him in electing him to honor membership was read.

Dr. Frederick A. Baldwin made an oral report for the health and public instruction committee and urged the councilors to do all in their power to secure the

passage of the Richter Bill which makes it a misdemeanor for any one to accept treatment at a clinic or dispensary who is able to pay for it.

Dr. Robert M. Funkhouser submitted an oral report for the Bartscher Fund Committee which was accepted.

Dr. Seabold reported orally for the business bureau, stating that it was self-supporting.

Dr. Kane moved that Dr. Seabold be thanked for his efforts in organizing the Business Bureau.

Dr. Kuhlmann offered an amendment to the effect that the bureau be named the Seabold Business Bureau and that a page in the records of the Society be set aside giving the history of its organization. Dr. Kane accepted the amendment and the motion carried.

Dr. Robert E. Schlucter read a report for the Library Committee outlining its activities during the year 1917. Dr. Kane moved that the committee be thanked for its excellent report and that it be published in the Bulletin. Carried.

Dr. Charles S. Rehfeldt made an oral report for the supplies committee.

Dr. Kane reported the acceptance of the Service Flag by the General Society at the annual meeting. He also reported that the Dental Society had requested the renewal of their lease and recommended that the Council empower the new house committee to renew the lease of the Dental Society. Dr. Kane further suggested that the water in the auditorium be turned off and that the washstands be removed. The recommendations of the house committee were adopted.

The following applications for membership by transfer were read for the second time and all were unanimously elected: William Walker Farris, by transfer from the Pottowatomie Medical Society (Oklahoma); Wilbur F. McConkey, by transfer from the Medical Society of Hawaii; George C. Trawick, by transfer from the Nashville Academy of Medicine.

The question of the renewal of the bond of the treasurer was brought up and it was decided not to bond the treasurer and to reduce the bond of the bookkeeper from \$1,000 to \$500.

The House Committee was authorized to renew the insurance on the books in our building belonging to the Public Library.

It was moved that the Council offer the services of the members of the Society to the Soldiers and Sailors Club and to the Home Service Section of the American Red Cross and assure them of the cooperation of the Society in their efforts to take care of the soldiers and sailors and their dependents. Carried.

It was moved that the secretary be requested to confer with the Judicial Council of the Missouri State Medical Association with the idea of remitting the dues of our members now in active service. Carried.

Letters from Congressmen Dyer, Meeker and Igoe, assuring the Society of their support in the proposed Dyer Bill were read and ordered filed.

Letters from Drs. John C. Morfit, Drew Luten, James Lewald, Roland F. Fisher, Meredith Johnson, Major G. Seelig, Ora F. McKittrick, Theron H. Slaughter and Cecil B. Shrout were read and action deferred until the Missouri State Medical Association decides the question of remitting the dues of men called into service.

The resignation of Dr. Ernst Mueller was read and accepted. The resignation of Dr. M. Filmore Arbuckle as a corresponding member was read and accepted. The resignation of Dr. Fred Falten was accepted with regret. It was moved that he be invited to become a corresponding member. Carried.

The secretary read a letter from Dr. Joseph Grindon suggesting that Dr. Hugo Rothstein, who is now 79 years of age, in failing health and no longer able to practice his profession, be placed on the honor list. On motion Dr. Rothstein was placed on the honor list.

Meeting of January 19

The meeting was called to order at 8:40 p. m. In the absence of the president, Dr. Phelps G. Hurford, first vice president, presided. The minutes of the previous meeting were read and approved.

Dr. Bransford Lewis presented a patient showing the results of Dr. Carl Beck's operation for hypopadias.

Dr. Rutherford B. H. Gradwohl presented specimens of rupture of the heart, aortic aneurysm, sarcoma of the neck and cystic kidney.

Dr. Samuel T. Lipsitz read a paper entitled, "Polycythemia." Discussion by Drs. Charles H. Neilson, Jerome E. Cook and R. B. H. Gradwohl; Dr. Lipsitz closing.

Dr. William E. Shahan read a paper entitled, "Pneumococcus Infection of the Cornea." Discussion by Drs. John Green, Jr., George Ives, William Engelbach and William H. Luedde; Dr. Shahan closing.

Dr. E. Lee Myers asked for the opinion of the society in regard to the ruling of the state fuel inspector closing doctors' and dentists' office buildings at 7 o'clock each evening.

Dr. C. C. Morris moved that the society pledge its support to State Fuel Inspector Crossley in his effort to win the war. Unanimously carried.

Dr. Shutt moved that a committee be appointed, himself not to be included, to see the state fuel commissioner with the idea of modifying his order as far as buildings leased by dentists and doctors were concerned. Dr. E. Lee Myers seconded the motion. Dr. William H. Luedde spoke in favor of the motion; Drs. Albert F. Koetter and Louis C. Boisliniere against it. Carried.

In accordance with the ruling of Mr. Crossley the society adjourned at 10 p. m.

Attendance 58.

Meeting of January 26

The meeting was called to order at 8:35 p. m., the president, Dr. Elsworth S. Smith, presiding. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

A paper entitled, "The Use of Massive Doses of Digitalis in Heart Disease," by Dr. G. Canby Robinson. Discussion by Drs. George Dock, Warren P. Elmer and Elsworth S. Smith; Dr. Robinson closing.

Dr. Hillel Unterburg introduced Captain Hanna of the Canadian Army Medical Corps who related his experiences in two and one half years service in England and France.

Dr. Reder moved that a vote of thanks be extended Captain Hanna for his interesting talk. Carried.

Dr. Alexander E. Horwitz read a paper entitled, "Chronic Backache from an Orthopedic Standpoint." Discussion by Dr. Reder; Dr. Horwitz closing.

Dr. Andre Z. De Weal demonstrated his apparatus for the "Purpose of Producing Fluororoentgenography."

Dr. E. Lee Meyers reported for the committee about closing office buildings at 7 o'clock. Drs. Kane and Sharpe spoke against accepting committee's report. Dr. Boisliniere moved the committee be continued and report next Saturday.

Dr. Norvelle Wallace Sharpe moved that the society extend an invitation of hospitality to all medical representatives of our Army and Navy and that of our associates, that they receive a copy of our Bulletin, and that the privileges of the floor be extended to them. Carried.

Adjournment 10:50 p. m.

Attendance 90.

Meeting of Feb. 2, 1918

The meeting was called to order at 8:35 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

Dr. Ross A. Woolsey presented a case of Malta fever together with history and exhibition of blood plates. The chair declared a recess of three minutes for the purpose of examining the blood plates. Discussion by Drs. J. Ellis Jennings, Cleveland H. Shutt, Edward W. Saunders and Elsworth S. Smith; Dr. Woolsey closing.

The scientific program consisted of a paper entitled, "Fractures of the Hip and Treatment," by Dr. John McH. Dean. Discussion by Drs. Louis Rassieur, William T. Coughlin, Alonzo R. Kieffer, J. Wilbur Shankland, John Dawson Hayward, Carroll Smith, Walter C. G. Kirchner, Francis Reder and Cleveland H. Shutt; Dr. Dean closing.

Dr. Henrietta Borck, in discussing Dr. Dean's paper, presented a copy of a book, written by her husband, the late Dr. Edward Borck, entitled, "Fractures of the Femur." She also showed a picture illustrating Dr. Borck's splint.

Dr. E. Lee Myers reported for the special committee appointed to confer with Fuel Administrator Crossley requesting permission for doctors' office buildings to remain open later than 7 o'clock. He stated that the Police Department had been notified that doctors in office buildings would be allowed to remain open until 8 o'clock and that the St. Louis Medical Society would be permitted to conduct its meetings as they have in the past.

It was moved that the report be accepted and the committee discharged. Carried.

The chair stated that Dr. E. W. Saunders had been called from the meeting and had asked that his paper be deferred until next Saturday evening.

It was moved that Dr. Saunders' paper be made a special order of business to follow immediately after the reports of cases. Carried.

It was moved that the report of the Business Bureau be made a special order of business to follow immediately after Dr. Saunders' paper. Carried.

Dr. Smith read a letter from the Liberty Loan Organization requesting that the society appoint some member to have charge of the general supervision of the collection of the physicians of St. Louis in the distribution of the next Liberty Loan, and that this man be appointed chairman of a committee to be selected by him and that his committee cooperate with the Liberty Loan Organization and be responsible to it for the subscriptions received. They further suggested Dr. R. Emmett Kane for the chairmanship of this committee on account of his experience in and familiarity with the work involved.

Dr. Koetter moved that the chair be authorized to appoint Dr. Kane chairman of a Liberty Loan Committee and that the appointment of the other members of this committee be left to Dr. Kane. Seconded by Dr. Boisliniere.

Dr. Kane moved that the communication of the Liberty Loan Organization be endorsed but that the president be left free to appoint the chairman and the other members of the committee, he declining to serve. Carried.

Dr. Boisliniere moved that the doctors be urged through the Bulletin to send in their subscriptions to the next Liberty Loan through the office of the St. Louis Medical Society. Carried.

Dr. Cleveland H. Shutt presented the perfected Dyer Bill (House Bill 8937).

Dr. Koetter moved that the society endorse the bill as presented by Mr. Dyer and that the representatives from St. Louis and the senators be notified of the action of the society. Carried.

Attendance 110.

ARTHUR GUNDLACH, M.D., Secretary.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY, FORTY-SIXTH MEETING, MONDAY, DEC. 10, 1917

1. EXHIBITION OF CASES.

A. A CASE OF PARAMYOCLONUS MULTIPLEX.—By DR. GILLILAND.

This case is presented because of the presence of peculiar muscular contractions seen particularly in the thighs. The contractions are fibrillary in character; small muscle bundles varying in thickness from $\frac{1}{2}$ to 2 or 3 cm. and in length from 3 or 4 to 10 or 12 cm. are seen to contract irregularly. They are clonic in type. This phenomenon is seen principally on the anterior surface of the thighs, but also to a lesser degree on the posterior surface of the thighs; in the legs, abdomen, back and arms. The contractions are present during sleep but it was not determined whether they are as great. The patient thinks there has been some decrease in the strength and frequency of the contractions while he has been in the hospital.

The history of the present illness is as follows: Four or five months ago patient first noticed weakness in the right foot; then weakness of the right leg and thigh; then the left foot and whole extremity. No change of sensation was noticed. About the time of onset of the weakness, there was noticed contractions of small portions of the muscles in the calves and soon after in the thighs. The contractions increased in severity until several weeks ago; since that time the strength has remained constant. There has been no soreness of the muscles at any time.

Twenty-eight years ago the patient had a sunstroke; since that time he has frequently had severe muscle cramps following hard work or work in the hot sun. He says the present cramps are different from the cramps due to work in the following respects: Cramps from work involved larger muscle bundles, and muscle soreness followed the cramps. The present cramps are slightly painful but no soreness is noticed later. The patient thinks he has had no cramps from work for six months.

On entering the hospital the patient complained of weakness and cramps of the legs. His past history shows typhoid and malaria twenty-eight years ago; sunstroke about the same time; venereal diseases negative; alcoholic beverages to moderation years ago but none for the past fifteen years. His family history is negative; has six children living and well.

Physical examination shows patient of 66 years; heart 13 cm. to the left, otherwise negative; some muscular atrophy but it is a question whether more than is to be expected in a man of his age; paralysis of the extensor muscles of the toes of the right foot; reflexes practically normal; marked general arteriosclerosis.

The following are to be considered in the diagnosis of this case: Paramyoclonus multiplex of Friedreich; arteriosclerosis affecting the anterior portion of the spinal cord and particularly the thoracic and lumbar regions; muscle phenomena resulting from the general arteriosclerosis with ischemia of the muscles.

Discussion by Drs. Graves and Sachs.

B. MULTIPLE KELOIDS.—By DR. DORRIS.

Discussed by Dr. Sachs.

C. FOREIGN BODIES IN THE INTESTINAL TRACT.—By DR. BECHTOLD.

Discussed by Dr. Sachs.

2. SOME FACTORS IN THE LIFE AND GROWTH OF TRANSPLANTED TISSUES.— By DR. LEO LOEB.

(1) The soil on which the transplanted tissues grow is of importance. Kidney and uterus transplanted into pockets in the ear of other individuals of the same species perish at an earlier date than pieces transplanted subcutaneously into the abdominal wall.

(2) Auto and homoio transplantation of the uterus were studied in conjunction with Dr. Cora Hesselberg and Dr. William Kerwin. While in the case of homoio transplantation of thyroid and kidney lymphocytes and connective tissue of the host destroy the strange tissue, in the case of the uterus lymphocytes play only a subordinate rôle; the homoiotoxins exert a direct injurious influence on the transplanted connective tissue and muscle; the epithelium perishes last and is again at least partly injured by lymphocytes and by the unfavorable soil which the changed stroma presents.

It seems that certain connective tissue structures and unstriated muscle are more accessible to the direct injurious effect of homoiotoxins than epithelial tissues (surface epithelium as well as gland tissues).

(3) Bloodclots behave similarly after auto and homoio transplantation, no marked difference in the behavior of lymphocytes or connective tissue toward both kinds of clot being noticeable. It is therefore probable that products of metabolism rather than preformed endocellular substances represent the "homoiotoxins."

(4) Sensitization of guinea-pig tissues to horse serum and subsequent injection of horse serum does not modify the behavior of tissues after homoio transplantation, provided the general condition of the animal is not affected through the second injection.

(5) In contradistinction to tumor tissue normal thyroid tissue does not seem to elicit a noticeably earlier lymphocytic reaction on the part of the host tissue after a second inoculation carried out about ten days after the first inoculation. It remains for further study to determine whether a second inoculation does not in certain cases increase the strength of the lymphocytic reaction.

(6) Not only after auto, but also after homoio transplantation of the thyroid in thyroidectomized pigs a compensatory hypertrophy of the transplanted piece can take place.

(7) The lymphocytes are the finest reagents for the detection of those biochemical differences which exist between individuals of the same species.

3. OBSERVATIONS ON THE PHYSIOLOGY OF THE SUBMAXILLARY GLAND—WITH SPECIAL REFERENCE TO THE ELECTRICAL VARIATIONS.—By DR. ROBERT GESELL.

The electrical variations of the submaxillary gland activated in various ways were graphically recorded.

Both two-gland leads and single-gland leads were employed.

To interpret the deflections, blood pressure, secretion and volume flow of blood were simultaneously recorded.

To maintain a constant condition of the animal, the volume flow of blood was studied by an automatic and bloodless method devised for these experiments.

The electrical deflections obtained from prolonged chorda stimulation with the usual lead, commonly shows four negative waves. These deflections, however, even with the general condition of the animal constant, show a variability, depending largely on four factors: duration of stimulation, strength of stimu-

lation, duration of the period of rest, and the position of the electrodes on the gland.

By keeping all four of these factors constant, provided the period of rest is sufficient, superimposable deflections can be obtained. This suggests the practicability of studying glandular processes by the electrical method, and permits the establishment of controls for studying the effects of the introduction of other variables.

Results of some experiments indicate that contraction of the salivary ducts may account for the first negative wave, but other causes, such as relaxation of the blood vessels, were not ruled out.

The second and third negative waves have much in common. In most experiments, the amplitude in these waves varied roughly with the rate of secretion. This correspondence may in part account for the dip in the deflections between the second and third waves elicited by prolonged chorda stimulation. Certain experiments, however, indicate that change in rate of secretion may not be the sole cause of this dip.

Frictional electricity, as produced by the flow of saliva or blood through the vessels, is probably a minor factor in determining the deflection. Obstruction of either the salivary duct or carotid artery during glandular activity, however, markedly affects the electrical variation. The effect of arterial obstruction is probably produced by regulating the effect of blood supply on glandular metabolism.

The fourth negative wave is not constant. When it does occur it may last as long as twenty minutes, and may possibly represent the progress of recovery processes.

There seems to be a number of factors operating to produce the resultant deflection.

Interpretations of the deflections at the present are only tentative.

Discussion by Dr. Erlanger.

4. A NOTE ON THE CONDUCTION OF THE CARDIAC IMPULSE THROUGH THE VENTRICLES.—By DR. G. CANBY ROBINSON.

Certain abnormalities in the form of the electrocardiogram are generally recognized as evidence of faulty conduction of the cardiac impulse through the ventricles. These abnormalities consist in prolongation of the time required to complete the first series of waves, the Q-R-S group, of the ventricular part of the electrocardiogram and notching of the main wave of the group. The form of the electrocardiogram may also serve to distinguish delayed transmission or blocked impulses beyond the main branches of the ventricular conducting systems from actual block in one of the branches which conveys the cardiac impulse to the two ventricles.

Recently an attempt has been made by Oppenheimer and Rothschild to associate faulty conduction of the cardiac impulse within the ventricles with anatomical lesions involving the intraventricular conducting system. This association may be correctly assumed in some cases, but I have obtained records from a considerable number of cases which seem to prove that faulty conduction through the ventricles may depend on functional fatigue, the cardiac impulse reaching the ventricles before they have had sufficient time to recover from previous activity. The reason why the ventricles have not recovered may depend on the fact that a cardiac impulse is sent down from the auricles immediately after a spontaneous ventricular contraction, or it may depend on an abnormally slow recovery of the ventricles. In the latter case distinct improvement in the ventricular conduction may be observed to follow slowing of the heart rate which allows longer diastolic pauses. The rate of recovery

of conduction may be observed also to become more rapid with improved circulatory efficiency.

Examples are shown of each type of impaired conduction through the ventricles.

From these observations it may be inferred that certain metabolic processes take place in the ventricles during their activity which depress conductivity, and that a definite length of time is required for the complete recovery of the function of conduction. Faulty conduction is observed when the cardiac impulse reaches the ventricles before this recovery is complete. The length of time required for recovery of conductivity may be increased in circulatory diseases, and changes in the time required for recovery may occur with alterations in the state of circulatory efficiency. It is obvious that faulty conduction through the ventricles is not necessarily dependent on anatomical lesions in the ventricular conducting system.

The delay in the recovery of ventricular conduction probably depends on the faulty removal of acid metabolites, as suggested by Mines. Burrigge has shown that the addition of acid to perfusion fluid slows the conduction of the impulse through the ventricle of the frog, but he also points out that potassium and chlorids have the same effect. An accumulation of acid metabolites might be expected when the circulation through the ventricular walls is impaired.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in the assembly room of the Public Library Wednesday, Feb. 6, 1918, at 8 o'clock p. m., with the president, Dr. Daniel Morton, in the chair. Twenty-three members were present.

The regular order of business was set aside and the chair appointed Dr. Floyd Spencer to at once telephone a message of sympathy and the well wishes of our society for the speedy recovery of Dr. C. R. Woodson. This having been done, the minutes of the two previous meetings were read and approved.

Owing to the sickness of Dr. C. R. Woodson, chairman of the library committee, no report was forthcoming from that committee.

Through the courtesy of Dr. H. DeLamater, his phone, located in the assembly room, was placed at the disposal of the society during their sessions.

The following communications were read and submitted for discussion:

Communication from Dr. E. J. Goodwin, requesting a paper from at least one of our members to be read at the annual meeting of the Missouri State Medical Association to be held at Jefferson City, May 6, 7 and 8.

Communication from Dr. Charles Wood Fassett tendering our society a service flag, and suggesting that we have a flag raising night at which time the flag is to be unfurled. The proposition of Dr. Fassett was accepted and appropriate ceremonies placed in the hands of the program committee.

Communication from the Auxiliary Medical Defense Committee of Buchanan County requesting the indorsement and support of House Bill No. 8937, providing for proper military rank of medical officers in both the Regular Army and in the Medical Reserve Corps when called into service, and the indorsement of this bill was adopted. The secretary was instructed to write the members of Congress to that effect.

The application of Dr. William Franklin Carrol received its first reading and was referred to the censors for investigation and report.

Clipping from the *Army and Navy Journal* describing extensions which are being made in the scope of the medical training camp by the addition of courses

in specialties required of the medical, sanitary and veterinary corps was read and submitted.

Dr. H. DeLamater requested the support of the society in the passing and enforcement of various laws relating to the duties of his office.

The library committee was authorized to complete arrangements for placing on file in the Public Library a selected list of medical journals properly indexed and arranged for the convenient use of our members.

On motion of Dr. Ladd, seconded by Dr. Mays, the chairman was instructed to appoint a committee of three to revise our by-laws.

The program committee announced that the meeting to be held March 20 would be a social and scientific session to convene at Savannah, Andrew County.

On motion of Dr. DeLamater, seconded by Dr. Spencer, a resolution was passed in which our society was instructed to request the Welfare Board to cooperate with the Buchanan County Medical Society for the purpose of securing clinical material at the Noyes Hospital.

Our old friend and colleague, Lieut. O. A. Schmid, home on a furlough, was given an enthusiastic reception and entertained the society with a very striking and patriotic address.

Meeting of February 20

The Buchanan County Medical Society meeting was held at St. Francis Hotel, Wednesday evening, Feb. 20, 1918, Dr. Daniel Morton in the chair. There were thirty-two members present. This meeting turned out to be one of the most enjoyable sessions in the history of our Society and the committee in charge was particularly fortunate in their arrangement of the program and in securing the speakers who appeared. Addresses were made by Captains C. E. Morton and J. F. McGill from the post hospital at Fort Leavenworth, Kansas. The subject of their papers was "The Duties and Obligations of Medical Men in the Army."

Following these addresses, it was the privilege of those present to listen to one of the most beautiful and inspiring appeals by Rector H. Maloney from Christ Church, ever delivered before this body, and a vote of thanks was extended to Reverend Maloney on the completion of his address, which was made in connection with the unfurling of the Buchanan County Medical Society's service flag. The flag was donated by Dr. Charles Wood Fassett, who unfortunately was unable to be present at the exercises. This flag contains twelve stars, representing the members of our Society who have enlisted in the service to do their bit.

The application of Dr. Franklin G. Weary for membership in the Society received its first reading and was referred to the proper committee for investigation and report.

W. F. GOETZE, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met at Cape Girardeau, Feb. 11, 1918, at 8 p. m. After finishing up old business, Dr. D. G. Seibert, the newly elected president, took the chair.

The secretary reported thirty-two members had paid dues for 1918.

Dr. D. H. Hope, chairman of the auxiliary committee of the National Defense Council for the county, presented several communications, and the election of other officers of the committee was in order: Dr. R. F. Wichterich was elected vice president, Dr. W. N. Howard, secretary, and Dr. D. G. Seibert, assistant secretary.

On motion Society adjourned.

E. H. G. WILSON, M.D., Secretary.

CLARK COUNTY MEDICAL SOCIETY

The Clark County Medical Society met Jan. 13, 1918, in a call meeting and among other things, elected officers for the year 1918 as follows:

President, Dr. F. A. S. Rebo, Alexandria; vice president, Dr. F. A. Johansen, Kahoka; secretary and treasurer, Dr. J. R. Bridges, Kahoka; delegate to State meeting at Jefferson City, Dr. J. L. McConnell, Revere; alternate, Dr. P. A. Geeslin, Kahoka.

J. R. BRIDGES, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Snapp Hotel in Excelsior Springs, Monday evening, January 28, with about twenty members present.

Drs. E. Lowrey and Y. D. Craven presented patients for examination.

The address of the evening was given by Dr. A. Sophian of Kansas City. Dr. Sophian chose the subject, "Factors of Successful Immune Therapy," and handled it in a masterful manner. The basic principle, as given by the doctor, is the introduction of an alien protein into the system of the patient rather than giving bactericidal agents. For instance, the use of coli-vaccine in typhoid fever is equally potent with typhoid vaccine and results are fully as satisfactory. However, he preferred the polyvalent in sera and vaccines. But the basis of all such therapy is the alien protein. Dr. Sophian enlarged fully on the merits of normal serum. It is effectual by any method of administration in infectious diseases. The serum must come in contact with the diseased part. Apply locally when practicable; local subcutaneous in localized infections; intravenously in systemic infections. The method of administration may be suggested by the effect desired. Hypodermically, the effect is fully had in twenty-four hours; intramuscularly, in eighteen hours; intravenously, the effects are almost immediate. "Negative phase," or anaphylaxis, is at times alarming. Blood pressure should be watched during administration of sera. A fall of 20 mm. demands cessation. In danger, bleed the patient, separate the serum from blood and reinject. I wish I might give the readers of this department of THE JOURNAL a full report of this lecture. I am sorry for the member who missed it.

An interesting talk on meningitis was an appropriate ending for the evening. It was worth while—worth while. Don't forget our Roll of Honor. Are you holding back?

The following visitors were present: Dr. Charles Wood Fassett, Kansas City; Dr. A. R. Remley, Lawson; Dr. Abraham Sophian, Kansas City.

J. J. GAINES, M.D., Secretary.

GRUNDY COUNTY MEDICAL SOCIETY

The Grundy County Medical Society held a meeting in the Trust Company Building, Trenton, Dec. 31, 1917. The meeting was called to order by the president, Dr. J. F. Fair. The following members were present: J. F. Fair, Trenton; E. J. Mairs, Laredo; C. H. Cullers, Spickard; J. A. Asher, Trenton; W. H. Winningham, Trenton; O. R. Rooks, Trenton.

No program had been arranged. The report of the treasurer shows a balance on hand of \$36.

No new business being presented the society elected the following officers for the ensuing year: president, J. A. Asher, Trenton; secretary, O. R. Rooks, Trenton; treasurer, W. D. Fulkerson, Trenton; censor for

three years, C. H. Cullers, Spickard; delegate, E. A. Duffey, Trenton.

There being no further business the society adjourned to meet again in regular session the first Tuesday in February, 1918.

O. R. ROOKS, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The meeting was called to order at 3:30 p. m., Feb. 13, 1918. In the absence of the president and vice president, Dr. Carter took the chair by request of the Society. Present: Drs. C. A. P. Dunnivant, John H. Sutter, A. F. Meisch, Horine Miles, Howard Carter, Marshall Baker, R. D. Moore, William R. North, A. Conway. Visitors: Drs. J. J. Singer and G. H. Reinhardt of St. Louis. On account of limited time the reading of the minutes of previous meeting was postponed to next meeting.

A letter to the medical section of the County Defense Committee urging the support of House Bill 8937, introduced by Representative Dyer, providing for the proper rank of Medical Officers, was read with the request that the Society take proper action officially. By resolution, duly carried, the secretary was instructed to write our representatives in Congress urging their support of the early passage of the bill.

Dr. Singer of Washington University gave a most interesting and instructive lecture on "Present Day Conceptions of Pulmonary Tuberculosis," illustrated by roentgen-ray pictures.

A vote of thanks was tendered Dr. Singer, after which refreshments were served and a general good time, socially, followed.

ARTHUR CONWAY, M.D., Secretary.

WAYNE COUNTY MEDICAL SOCIETY

A regular meeting of the Wayne County Medical Society was held at Piedmont, Feb. 26, 1918, the president, Dr. P. P. Burton, in the chair. Members present were Drs. P. P. Burton, G. W. Toney and R. J. Owens; visitor, Dr. J. F. Wagner of Greenville.

There were no papers read but an interesting discussion of clinical cases proved helpful.

We are to meet again the last Tuesday in March, 1918, it being the 26th of the month, at Greenville.

R. J. OWENS, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met in Mansfield in the office of Dr. R. M. Rogers, February 8, at 2 p. m. The meeting was called to order by the president, Dr. R. A. Ryan of Norwood. The following members were present: Drs. A. C. Ames, Charles Palmer, H. G. Frame of Mountain Grove; Drs. R. A. Ryan and L. T. Vanoy of Norwood; Drs. R. M. Rogers and J. A. Fuson of Mansfield.

Dr. Vanoy read a paper on "Asthma," and Dr. Palmer read a paper on "Ulcers of the Stomach." These papers were scientifically prepared and were very interesting and brought out a lively discussion on each subject by all present.

After the regular proceedings of the society the members present proceeded to organize themselves into a medical defense committee and elected the following officers: president, Dr. R. M. Rogers, Mansfield; vice president, Dr. R. A. Ryan, Norwood; secretary, Dr. Charles Palmer, Mountain Grove; assistant secretary, Dr. B. E. Latimer, Hartville.

Each member present expressed himself as being well pleased with the meeting and after each member had wished all other members well the society adjourned to meet in Hartville the first Thursday in May.

J. A. FUSON, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

STERILE SOLUTION COAGULEN-CIBA (3 per cent.) 1.5 Cc. AMPOULES.—Each ampule contains 1.5 Cc. of a 3 per cent. solution of coagulen-Ciba. A. Klipstein and Co., New York City.

STERILE SOLUTION COAGULEN-CIBA (3 per cent.) 20 Cc. AMPOULES.—Each ampule contains 20 Cc. of a 3 per cent. solution of coagulen-Ciba. A. Klipstein and Co., New York City.

TABLETS COAGULEN-CIBA 0.5 GM.—Each compressed tablet contains 0.5 Gm. coagulen-Ciba and 0.46 Gm. sodium chloride. A. Klipstein and Co., New York City.

DICHLORAMINE-T (CALCO).—Paratoluenesulphonedichloramide.—This is said to act much like Chloramine-T, but is capable of being used in a solution of eucalyptol and liquid petrolatum, thus securing the gradual and sustained antiseptic action. Like Chloramine-T, dichloramine-T (Calco) is said to act essentially like hypochlorites, but to be less irritating to the tissues. Dichloramine-T (Calco) is said to be useful in the prevention and treatment of diseases of the nose and throat. It has been used with success as an application to wounds, dissolved in chlorinated eucalyptol and chlorinated paraffin oil. Manufactured by the Calco Chemical Co., Boundbrook, N. J.

HALAZONE-CALCO.—Parasulphonedichloramidobenzoic acid.—It is said to act like chlorine and to have the advantage of being stable in solid form. In the presence of alkali carbonate, borate and phosphate it is reported that halazone in the proportion of from 1:200,000 to 1:500,000 sterilizes polluted water. Manufactured by the Calco Chemical Co., Boundbrook, N. J.

CHLORAMINE-B (CALCO).—Sodium Benzenesulphochloramine.—It contains from 13 to 15 per cent. available chlorine. The actions, uses and dosage for Chloramine-B (Calco) are claimed to be essentially similar to those given in New and Nonofficial Remedies, 1917, for Chlorazene. This compound was introduced into medicine by Dakin. Its physical and chemical properties are similar to those of chloramine-T. Manufactured by the Calco Chemical Co., Boundbrook, N. J. (*Jour. A. M. A.*, Jan. 12, 1918, p. 91).

PROPAGANDA FOR REFORM

THE CARREL-DAKIN WOUND TREATMENT.—William H. Welch writes that he was most favorably impressed with the Carrel treatment of wounds, and believes that Carrel should receive credit for calling attention to the possibility of the sterilization of infected wounds by chemical means. He holds that while undoubtedly the technic of the Carrel treatment is elaborate and requires an intelligence and skill on the part of the surgeon which cannot be counted on for the average surgeon, and that while the preparation of the neutral solution of sodium hypochlorite also requires chemical skill, surgeons should acquaint

themselves with the principles and technic, and try to overcome the difficulties of applying the treatment (*Jour. A. M. A.*, Dec. 8, 1917, p. 1994).

HEMO-THERAPIN.—The Council on Pharmacy and Chemistry reports that, according to the Hemo-Therapin Laboratories, New York, Hemo-Therapin is a "combination of highly refined cresols and phenols (which have been detoxicated by special processes) with salts of iron, potassium, sodium, phosphorus and calcium in minute but physiologic proportions—the solution as a whole being designed to approximate closely in various fundamental details the chemistry of the blood." No statement is made, however, as to the quantities of the several ingredients, nor is any information given as to the identity of the "cresols" and "phenols," or as to the nature of the processes whereby these are "detoxicated." The Council explains that the Hemo-Therapin Laboratories ask physicians to believe that the occasional intravenous administration of this liquid will benefit or cure a long list of ailments, including erysipelas, septicemia, pyemia, purpural infection, malaria, pneumonia, typhoid fever, diabetes, chronic Bright's disease, goiter, arteriosclerosis and locomotor ataxia. The testimonials which are presented for the claims bear a striking likeness to those found in "patent medicine" almanacs. One of the cases is a woman who was bitten by a snake seventeen years ago and who, on the anniversary of the bite, suffers severely from the original bite (*Jour. A. M. A.*, Jan. 5, 1917, p. 48).

VENOSAL.—The Council on Pharmacy and Chemistry reports that Venosal, sold by the Intravenous Products Company, Denver, Colo., is inadmissible to New and Nonofficial Remedies because its chemical composition is indefinite; because the therapeutic claims are exaggerated, and because the composition is unscientific. Venosal is a solution of sodium salicylate containing also colchicum and an insignificant amount of iron. Since it is possible to obtain the salicylate effects promptly and certainly by oral administration, the inherent dangers of intravenous medication render its routine employment unwarranted. At this time, when economy is a national policy, a further objection to the use of Venosal is the unnecessarily high expense of Venosal itself and the administration (*Jour. A. M. A.*, Jan. 5, 1917, p. 48).

OUR ARCHAIC PATENT LAWS.—The reports of the Council on Pharmacy and Chemistry on Secretin-Beveridge and the Need for Patent Law Revision are opportune. At the request of the National Research Council the "Patent Office Society," an association of employees of the U. S. Patent Office, has created a committee to study the U. S. Patent Office and its service to science and to arts. There is no question that one of two things is needed: either a radical change in the patent law itself or the application of more brains in its administration. Now the United States Patent Law is too often used to obtain an unfair monopoly of a medicament or to abet quackery (*Jour. A. M. A.*, Jan. 12, 1918, p. 95).

SECRETIN-BEVERIDGE AND THE U. S. PATENT LAW.—In 1916, A. J. Carlson and his co-workers demonstrated that commercial secretin preparations contained no secretin, and that secretin administered by mouth or even into the intestine was inert. Yet a U. S. patent was subsequently issued to James Wallace Beveridge, for a process of preparing secretin preparations which would contain secretin when they

reached the consumer, and in a form resisting destruction in its passage through the stomach. At the request of the Council on Pharmacy and Chemistry, A. J. Carlson and his associates studied the stability of the secretin made according to the Beveridge patent. The investigation shows that the patent gives no process for the manufacture of commercially stable secretin preparations, nor any means for preventing the destruction of secretin by the gastric juice when administered orally (*Jour. A. M. A.*, Jan. 12, 1918, p. 115).

NEED FOR PATENT LAW REVISION.—The Council on Pharmacy and Chemistry publishes a report prepared by its committee on patent law revision, which is an appeal for an amendment of the patent law which governs the issuance of patents on medicinal preparations, and more particularly for a revision on the procedure under which such patents are issued. The report points out that to increase our national efficiency, the government must protect and stimulate science, art and industry, and at the same time curb waste of the country's resources; and that, to this end, the patent office should encourage discoveries which go to increase national efficiency, and refuse patent protection when such protection is not in the interest of national efficiency, conservation of energy and material resources. The report presents a considerable number of specific instances which demonstrate that patent protection has been given where it was not deserved and not in the interest of the public. The report concludes with a reference to the investigation of a patent granted for a preparation of secretin, apparently without any attempt to confirm the highly improbable claims of the patent applicant (*Jour. A. M. A.*, Jan. 12, 1918, p. 118).

ARSPHENAMINE.—No, this is not a new chemical; it is simply the name adopted by the Federal Trade Commission for the hydro-chlorids of 3-diamino-4-dihydroxy-1-arsenobenzene—in other words, salvarsan. The three firms which have been licensed to manufacture this drug are permitted to have their own trade names for it, but the official name "arsphenamine" must be the prominent one on the label of all brands. Hence physicians should at once make it a point to learn and use the name "arsphenamine" (*Jour. A. M. A.*, Jan. 19, 1918, p. 167).

CACTINA PILLETS.—According to the manufacturer of Cactina Pillels (The Sultan Drug Co.), "cactina" is "invaluable in all functional cardiac disorders such as tachycardia, palpitation, arrhythmia, and whenever the heart's action needs regulating or support." The manufacturer gives no information as to the mode of action of "cactina," but states that it is totally unlike that of digitalis. An examination of the literature indicates that *Cactus grandiflorus* is therapeutically inert, and no one except Mr. Sultan of the Sultan Drug Company claims to have isolated an active principle of it. The Council on Pharmacy and Chemistry examined the literature relating to cactus and certain proprietary preparations, including Cactina Pillels, alleged to be made from cactus, and reported that the literature does not afford a single piece of careful, painstaking work which lends support to the claims made for Cactina Pillels. Since then, Hatcher and Bailey examined genuine *Cactus grandiflorus*, and also found that the drug was pharmacologically inert (*Jour. A. M. A.*, Jan. 19, 1918, p. 185).

SURGODINE.—The A. M. A. Chemical Laboratory having found Surgodine (Sharp and Dohme) to contain 2.51 Gm. free iodine (instead of 2.25 per cent. as claimed) and 1.78 Gm. combined iodine (probably chiefly hydrogen iodide), the Council on Pharmacy and Chemistry reports that it is essentially similar to the official tincture of iodine except that it is considerably weaker and, instead of potassium iodide, it presumably contains hydrogen iodide and probably ethyl iodide to render the iodine water-soluble. Its composition, however, is secret. The Council held Surgodine inadmissible to New and Nonofficial Remedies because its composition is secret; because the therapeutic claims made for it are exaggerated and unwarranted, and because it is an unessential modification of the official tincture of iodine. Surgodine is a good illustration of the economic waste inseparable from most proprietary medicines. While the free-iodine strength of Surgodine is only about one-third that of the official tincture its price is between two and three times as high (*Jour. A. M. A.*, Jan. 26, 1918, p. 257).

DIONOL.—If physicians take the word of the Dionol Company, the therapeutic possibilities of Dionol are apparently limited only by the blue sky. Even the company admits that "the unprecedented range of action" of this marvel "may come as a surprise." A glance over the published case reports confirms the inference. Dionol is furnished in two forms: as an ointment and as an emulsion. Dionol itself is a sort of glorified petrolatum, the use of which is said to prevent the leakage of energy from the nerve cells, and by overcoming the short-circuiting always said to be present in inflammations, is asserted to accomplish its wonders (*Jour. A. M. A.*, Jan. 26, 1918, p. 257).

BOOK REVIEWS

A MANUAL OF ANATOMY. By Henry E. Radasch, M.Sc., M.D., Assistant Professor of Histology and Embryology in the Jefferson Medical College, Philadelphia. Octavo of 489 pages with 329 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$3.50 net.

This book is an exceptionally clear and concise exposition of anatomy and contains just enough descriptive matter to make the well arranged outlines interesting to the medical student and nurse, and to suggest more complete details to the graduate who has previously completed his more minute and extensive anatomical study, yet finds it advantageous to review this subject frequently. Both the common and the B. N. A. nomenclature are given—a most necessary arrangement in a modern textbook.

The chapters on osteology and neurology are very complete and deserve especial mention for the logical and concise manner in which they are presented. The illustrations, however, are the feature of the entire work, and are taken largely from the best works on anatomy and represent the very highest type of anatomical illustration. C. F. S.

THE THIRD GREAT PLAGUE, A DISCUSSION OF SYPHILIS FOR EVERYDAY PEOPLE. By John H. Stokes, A.B., M.D., Chief of the Section of Dermatology and Syphilology, The Mayo Clinic, Rochester, Minn. 12mo of 204 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.50 net.

If syphilis is to be eradicated the general public must first be educated to its symptomatology as well

as to its dangers, for recognition and protection go hand in hand. Stokes has endeavored to do this and his admirable little volume contains much information that will prove valuable to both physician and layman.

No claim for originality is made, for as the author states in the preface, almost every sentence is written under the shadow of some advance in knowledge which cost a lifetime of some man's labor and sacrifice.

Among the subjects discussed are syphilis as a social problem, the various tests for the detection of syphilis, the treatment and cure of the disorder, and mental attitudes in their relation to the disease. The chapters devoted to syphilis and prostitution and to moral and personal prophylaxis are particularly good. The subject matter is presented in a clear, concise, well balanced manner, and can readily be understood by any intelligent man or woman. It is to be hoped that the volume will meet with the wide circulation that its excellence deserves. R. L. S.

SURGERY AND DISEASES OF THE MOUTH AND JAWS. By Vilray Papin Blair, A.M., M.D., F.A.C.S., Professor of Oral Surgery in the Washington University Dental School, and Associate in Surgery in the Washington University Medical School. Third Edition Revised so as to incorporate the latest war data concerning gunshot injuries of the face and jaws. Compiled by the Section of Surgery of the Head, Subsection of Plastic and Oral Surgery, Office of the Surgeon-General of the Army, Washington, D. C. St. Louis: C. V. Mosby Company, 1917. Price, \$6.00.

This book has gone through three editions and has just been revised and considerably enlarged. So far as we know this is the best work on the subject and the new edition in its appearance and general effect greatly outdistances the previous ones.

The volume is larger because of the additional space needed for new war surgery. Several chapters are devoted to the most modern methods of treating such wounds as have been encountered in the present war. All that is recent in plastic surgery of the face is also to be found in the volume. This is singularly apropos and fills a want best known to those who are interested in that branch of the service. As an evidence of the appreciation of this fact by the proper authorities the volume has been ordered used as a textbook in the Army schools for instruction in oral and plastic surgery.

Comment has recently been made on the price asked by foreign authors for some of their works—price inflation due to war. The publishers of this book are to be complimented on the fact that although the book has been so much improved the price remains the same. W. T. C.

TUMORS OF THE NERVUS ACUSTICUS AND THE SYNDROME OF THE CEREBELLOPONTILE ANGLE. By Harvey Cushing, M.D., Professor of Surgery at Harvard University. Octavo of 296 pages with 262 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$5.00 net.

A work under the authorship of a man with the scientific training, experience and exacting traits of Dr. Harvey Cushing would be expected to be of a high order in every department. A careful review of his Tumors of the Nervus Acusticus leaves our expectations amply satisfied. The arrangement of the material presented is most excellent. Special attention should be called to the case reports which are abstracted so completely as to give practically all the essentials and are relieved of unnecessary, burdensome details. One chapter on etiology quotes the

opinion of a number of authorities, but wisely no commitment is made. A detailed analysis of the symptoms and diagnosis is carefully considered. However, a close study of a few of the splendid case reports should be more interesting and ought to stimulate the reader's diagnostic powers sufficiently.

Having been written by a surgeon we would hardly expect the treatment to be neglected. The author considers this phase of the problem quite optimistically. He does not share some of the past gloomy prognoses. Various operative procedures are cited, then a closely detailed description of his own operative technic is considered. The illustrations add materially to the written ideas. The subject concerns directly tumors of the cerebellopontine angle, having their origin in the eighth cranial nerve, but nearly all of the operative technic can be or is applied to interventions for any surgical lesions in the sub-tentorial region of the cranium.

An approval of the bibliography should not be neglected. It covers the subject completely. Ancient historical data is beautifully reviewed. The illustrations, both of the gross and microscopic, are all that could be desired. This monograph covers in a technical manner a rather narrow field but all the material is presented so clearly that interest and understanding are rendered simple. The book should be read by any physician or surgeon having the least interest in intracranial lesions. A. L. S.

MILITARY OPHTHALMIC SURGERY. Medical War Manual No. 3, authorized by the Secretary of War, under the supervision of the Surgeon-General and the Council of National Defense. By Allan Greenwood, M.D., Major, M.R.C., U. S. Including a chapter on Trachoma and Other Contagious Conjunctival Diseases, by G. E. DeSchweinitz, M.D., Major, M.R.C., U. S. Price \$1.50. Illustrated. Lea & Febiger, Philadelphia and New York.

The literary activities of the staff of experts summoned by Surgeon-General Gorgas are perhaps unique among the various kinds of medical service developed by this war. They include the exhaustive study and classification of all medical, surgical, and laboratory reports related to military medicine and sanitary science and rendering them available for both Army surgeons and civilian practitioners. Furthermore, a series of concise manuals is being published for the use of medical officers. They contain in compact "tabloid" form the concentrated, predigested mental pabulum calculated to guide the tenderfoot medical reserve officer as well as his more sophisticated brother in regular service. The exigencies of service require each officer to undertake in emergencies, at least temporarily, special work for which he may have little preliminary preparation. In such cases these manuals, with their simple practical directions, fill a much felt want. They seek not to instruct the specialists in the several lines covered by their titles, but as the crystalized wisdom of experts, even specialists cannot afford to ignore them.

Military ophthalmology would present a more correct title for Manual No. 3 than Military Ophthalmic Surgery, for less than one half of its pages are devoted to the consideration of ophthalmic surgery. The remainder deal with the equally important ocular inflammations more or less incident to army life and with ocular examinations, tests for malingerers, etc. Each section bears the imprint of matured ophthalmic judgment. The authors, the well-known Majors Allan Greenwood of Boston, G. E. DeSchweinitz of Philadelphia, and W. B. Parker of Detroit, have admirably controlled the natural tendency to write exhaustively and have made the manual clear, precise, and worthy of its prominent place in this series of notables. W. H. L.

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EDITOR

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ORIGINAL ARTICLES

INTRACRANIAL LOCALIZATION*

G. WILSE ROBINSON, M.D.
KANSAS CITY, MO.

In the investigation of suspected lesions within the cranial cavity there are four questions to be asked and, if possible, answered by the investigating physician. These questions are: First, Is there a lesion? Second, Where is it? Third, What is it? Fourth, What treatment will offer the patient the best chance of relief?

At this time we are interested in a consideration of question No. 2 and shall discuss intracranial localization. For the purpose of this discussion, the intracranial structures are divided anatomically into five general divisions, namely, the cerebral axis, or brain stem, the cranial nerves, the cerebellum, the basal ganglia and hypophysis, and the cerebrum.

The cerebral axis, or brain stem, is further divided into the medulla, pons, cerebral peduncles, or crura cerebri, and corpora quadrigemina. These structures are all interrelated, both anatomically and physiologically; and in them is located the nuclear areas of origin of all the cranial nerves, excepting the olfactory and optic. The two latter nerves, correctly speaking, are not peripheral nerves as are the ten other pairs of cranial nerves, but are portions of the brain which during the embryonal period have protruded themselves in a symmetrical or tube-like form.

The vertical level of lesions of the brain stem can usually be accurately determined because of their involvement of one or more cranial nerves.

The horizontal divisions of the brain stem are three; dorsally and just beneath the floor of the fourth ventricle or aqueduct of Sylvius lie the nuclei of the hypoglossal, sensory division of the vagus, glossopharyngeal, vestibular, abdu-

cus, sensory division of the trigeminus, trochlear and oculo-motor nerves. In a more ventrally situated layer are the nuclei of the spinal accessory and facial nerves, and the motor nuclei of the vagus and trigeminus; and still more ventrally situated is the cochlear nerve in the acoustic tubercle.

A majority of the fiber complexes of the cranial nerves pass from their nuclei in a direct course to the base of the brain. Motor branches of the vagus and of the seventh cranial have a more circuitous connection with the base, while the trochlear or fourth cranial is unique in two respects: first, it emerges dorsally on the brain stem, and second, it decussates after its origin from its nucleus in the cerebral peduncles. The tracts of the other cranial nerves decussate before reaching their nuclei of origin.

Ventromesial to the region of the cranial nerve nuclei is the area occupied by the sensory tracts; they are formed by the spinothalamic and rubrothalamic tracts. Ventral to the sensory tracts are the pyramidal or motor tracts.

From before backward the three horizontal layers of the brain stem are, most anteriorly the pyramidal tracts; centrally, the sensory tracts; and most posteriorly the nuclei of origin of the cranial nerves and their fibers. The pyramidal tracts decussate at the extreme lower level of the brain stem, below the level of origin of any of the cranial nerves; and lesions affecting them above their point of decussation are manifested by spastic paralysis without muscular atrophy on the opposite side of the body; or if the lesion be sufficiently large to involve both pyramids a tetraplegia may result.

A lesion situated at the level of decussation may cause a hemiplegia cruciata, a paralysis of the leg on the opposite side, and a paralysis of the arm on the same side as the lesion, owing to the fact that the tract fibers of the arm decussate at a level slightly above the point of decussation of the tract fibers of the leg.

It matters not at what level the lesions affect the pyramid unilaterally in the brain stem above their decussation, the symptoms as referred to the extremities and trunk are the same. But

* Read before the Buchanan County Medical Society, St. Joseph, Mo., Jan. 16, 1918.

it is practically impossible for lesions to involve the cortico-spinal fibers of the brain stem without at the same time involving the nuclei of one or more cranial nerves.

Lesions of the pyramidal system above the brain stem do not disturb the functions of the cranial nerves to any considerable degree. The lower muscles of the face and of the tongue are paralyzed on the same side as is located the paralysis of the arm and leg; but the muscles of the eye, the upper facial muscles and the muscles of the neck, larynx and deglutition escape. These muscles, as well as the diaphragm and muscles of the trunk are bilaterally enervated and destruction of one pyramidal tract, at any level from the cortex down to the nuclei of origin of the nerve supply does not impair their function. On the contrary: The paralysis resulting from a supranuclear lesion is manifested on the side opposite from the lesion, and the muscles do not atrophy or show the reaction of degeneration.

Resulting from lesions of the brain stem involving the pyramidal tracts and cranial nerve nuclei, we have alternating paralyses; the muscles of the extremities being paralyzed on the side opposite from the lesion, and the muscles supplied by the cranial nerve involved being paralyzed on the same side as the lesion. In addition to this we have the muscles supplied by the affected cranial nerve, showing a reaction of degeneration and atrophy. If the lesion be in the medulla at the level of the hypoglossal nerve, involving the nucleus of one hypoglossal and the pyramid of the same side, the symptoms are crossed, with paralysis and atrophy of the lateral half of the tongue, corresponding to the side of the lesion, with an arm and leg paralysis of the opposite side, the extremity paralysis being spastic in character without muscular atrophy.

Lesions involving the spinal accessory and motor nucleus of the vagus give an ipsilateral paralysis of the muscles of the neck, pharynx, larynx, and deglutition, with a contralateral extremity paralysis.

Lesions below the pons do not affect the facial nerve. Unilateral lesions of the pons produce an ipsilateral upper and lower facial paralysis, with reaction of degeneration and atrophy, and a contralateral extremity paralysis if the facial nucleus be involved. Occasionally the tract fibers of the facial are affected after the decussation, before reaching the nucleus. In this case reaction of degeneration and atrophy are absent.

If the lesion involves the sixth cranial nucleus the external rectus muscle of the eye is paralyzed on the same side as the lesion. If the motor nucleus of the fifth be involved the ipsilateral muscles of mastication are paralyzed.

Lesions of the peduncles involve the third and fourth cranial nuclei; owing to the infranuclear decussation of the fourth, the destruction of the

nucleus causes paralysis of the contralateral superior oblique.

If the lesion involve the pyramids and the motor oculi the result is complete ipsilateral ophthalmoplegia, excepting the external rectus and superior oblique, and a contralateral paralysis of the lower muscles of the face, tongue and extremities.

The So-Called Weber Syndrome.—Lesions of the corpora quadrigemina, owing to their close relationship to the cerebral peduncles, may cause simultaneously pupillary paralysis, paralysis of the external muscles of the eye, frequently symmetrical, ataxia, deafness, and disturbance of vision. Lesions of the base, which are extrapeduncular, quite frequently disturb the function of the structures of the cerebral peduncles.

Lesions of the brain stem may also involve the spinothalamic and bulbothalamic fibers, causing sensory loss below the level of the lesion. If the lesion be situated mesially and centrally, the spatial components of sensation are involved; if mesially and laterally, the affective components.

Lesions of the cerebellum cause quite typical symptoms. The cerebellum is the center of equilibrium and of muscle coordination, and has much to do with maintaining muscle tone. It has three anatomic divisions, namely, the middle lobe, or vermis, and two lateral lobes. The vermis controls the muscles of the trunk, head and neck; the lateral lobes control the ipsilateral extremities.

Lesions of the vermis disturb equilibrium and cause falling symptoms. The tendency is commonly to fall toward the lesion. If the lesion be in the anterior part of the vermis the patient falls forward; if at the dorsal extremity, backward. If the lesion be on the right side of the vermis the patient falls to the right; if on the left side, he falls to the left.

Lesions of either lateral hemisphere cause disturbance of the pointing reaction of the extremities.

Areas in the lateral lobes of the cerebellum are located for the various movements of the individual extremities. On the anterolateral aspect of the lobe is located the center for the outward tonus of the arm and leg of the same side; and on the posterolateral aspect is the center for the inward tonus of the ipsilateral extremities.

If the lesion involve the outward tonus center, impairing its function, there is a tendency for the arm and leg of the same side when pointing to deviate inward; if the lesion be of the inward tonus center, the deviation is outward.

The most prominent general symptoms of cerebellar lesions are hypotonus, asynergia, diadokokonesia and nystagmus, with the slow component toward the side of the lesion, hemiparesis, fixed attitudes of the head, disturbance of weight, estimation and vertigo.

The cerebellum is connected with the other divisions of the central nervous system through the medium of three peduncles arranged in pairs, the superior, middle and inferior. The inferior and middle peduncles are different in function, and convey chiefly cerebellipetal fibers to the cerebellum; while the superior peduncles convey chiefly cerebellifugal or efferent fibers. Through the medium of the spinocerebellar, frontocerebellar, and vestibulocerebellar tracts, the cerebellum is constantly receiving impulses from the muscles of the body, the semicircular canals, which are the organs of equilibrium, and from the cerebrum, and through the efferent fibers, which leave it chiefly by way of the superior peduncles, is constantly sending out impulses to all other parts of the central nervous system. Extracerebellar lesions may cause cerebellar symptoms; this is especially true of lesions of the cerebellopontine angle.

The highest division of the central nervous system is the cerebral cortex. It is the organ for conscious and psychic phenomena and is divided into different areas having a variety of functions. The cortex is divided into, first, motor areas; from these areas arise the pyramidal system of fibers, which enervate all the voluntary muscles; second, sensory areas, for the reception of superficial and deep sensory impulses in which end the various efferent tracts. The ganglion cells of the sensory cortical areas not only receive and bring into relation with consciousness the sensory stimuli but store up the same stimuli, producing memory pictures; third, cortical areas for special senses; in these areas end the terminal fibers of the visual, auditory, olfactory and gustatory tracts, and the storing up areas for memory pictures. Connected with these special sensory systems, we have simple memory pictures for touch, tone, colors, form, etc., and more complex for the appearance of objects, for the spoken and written word, etc., and fourth, psychic areas. All of these various areas are intimately associated with tracts of fibers called the association fibers, as it is through the medium of this association that simple perceptions are raised into concepts; as for instance, the hearing of a particular word stimulates the memory of its meaning, its appearance when seen on the printed page, and at the same time we have a concept of the object denoted by the word.

The fibers which originate in the cortex and pass to structures of lower levels in the central nervous system, converge on and are closely grouped in the internal capsule. Practically all of the sensory fibers passing to the cerebral cortex have their origin in the optic thalami, and pass, fanlike, to the different areas of the cerebral cortex. Fanlike arrangements of the motor and sensory fibers in the subcortical area form what is known as the corona radiata.

The internal capsule is situated between the

optic thalami internally and the corpora striata externally. The fibers of the internal capsule are so arranged that a horizontal section gives an anterior and posterior limb and knee. From the knee backward we have the motor tracts of fibers, the tracts for the motor cranial nerves being most anteriorly, and for the leg being most posteriorly of the motor fibers; but posterior to the motor fibers are the sensory fibers.

A consideration of the blood supply to these different structures is important, in view of the fact that a large majority of the lesions of the brain are vascular in origin. The brain receives its blood supply from two sets of arteries, namely, the vertebral and internal carotid. The vertebrals supply the medulla, after which they unite to form the basilar artery, which furnishes the blood supply to the pons and the cerebellum. At the point of diversion of the crura cerebri the basilar forms the post cerebral arteries, which send branches to the corpora quadrigemina and to the lower portions of the temporal and occipital lobes, and anastomose with the internal carotid of the same side through the posterior communicating arteries.

The internal carotid is divided into two branches, the anterior and middle cerebral arteries. The two anterior cerebral arteries are united by the anterior communicating artery, giving a complete arterial ring at the base of the brain known as the circle of Willis. The cerebral arteries pass forward around the border of the corpus callosum, supplying the anterior portion of the frontal lobes and the mesial surface of the hemispheres.

From a pathological standpoint, the middle cerebral artery is the most important; at the base of the brain it gives off branches to the optic thalamus, corpus striatum and internal capsule. The caudate-lenticulo-optic arteries, the lenticulo-striate artery, is known as the artery of cerebral hemorrhage.

The main trunk of the middle cerebral, or sylvian artery, passes to the island of Reil, where it splits up into terminal branches; these branches pass to the lower and middle frontal convolutions, the central convolutions, the supramarginal and angular lobes, and to the outer surface of the temporal lobes; thus to the center of speech and to a greater part of the sensori-motor cortical area, and to the auditory center in the cortex.

Cerebral lesions ordinarily cause motor paralysis. The motor centers are in the Rolandic area, along the fissure of Rolando, in the ascending frontal convolutions, and in the fissure of Rolando.

The center for the muscles of the face, tongue, head, etc., are situated most inferiorly; those of the legs, feet and toes most superiorly.

A lesion of the motor cortex, or of its radiating fibers of a given size, has less power for harm the nearer it is to the cortex; and the

nearer it is situated to the internal capsule the greater is its power for harm. Therefore, lesions of the cortex usually cause less complete and less extensive paralyzes than lesions of the internal capsule, or of the corona radiata near the internal capsule.

Vascular lesions of the motor cortex are usually the result of arterial occlusion, either due to an endarteritis obliterans or thrombus, or rarely an embolus; whereas vascular lesions of the internal capsule are usually due to hemorrhage.

Paralyzes following capsular lesions are much more rapid in their onset than are the paralyzes due to cortical lesions of thrombotic origin. Immediately following the onset of the paralyzes the deep reflexes are usually absent, or greatly depressed; later they are exaggerated, giving clonus and the Babinski toe phenomenon.

One important distinguishing feature between capsular and cortical lesions is the absence of aphasia in capsular lesions, whereas lesions affecting the motor cortical or subcortical area have associated speech disorders, if the lesion be on the same side as the speech center.

The sensory areas of the cortex are closely associated with the motor areas, chiefly in the ascending parietal convolutions; but they extend beyond these areas, and are not grouped so closely together as are the motor areas. Therefore, cortical lesions rarely cause complete sensory loss. Sensory changes most commonly seen in the paralyzed extremity or extremities are, ataxia, impairment of the sense of position in space, and of the faculty of stereognosis.

Lesions of the superior parietal convolution and the supra-marginal gyrus cause ataxia, the power to determine position, and astereognosis of the opposite hand, even though the motor area be not affected and there be no paralysis.

Lesions of the superior frontal convolutions cause a staggering gait, due to ataxia of the trunk muscles; this ataxia somewhat resembles cerebellar ataxia. Instead of anesthesia, the sensory disturbances of the cerebral cortex may be irritative in character, reacting upon the motor area, causing monospasm such as in Jacksonian epilepsy.

Permit me in this connection to call attention to the fact that lesions causing positive symptoms, such as tonic and clonic spasms of muscles, as in the different varieties of epilepsy and tremors such as are observed in paralysis agitans and disseminated sclerosis, are extra-pyramidal in character.

Pyramidal lesions produce negative symptoms such as paralysis. An irritation of the base of the second frontal convolution, the head and eye area, causes conjugate deviation of the eyes toward the sound side. Subcortical lesions of the sensory radiation cause more extensive sensory loss than do cortical lesions; and the nearer

the lesion is situated to the internal capsule the greater the sensory disturbance.

Some of the distinguishing characteristics of cerebral hemiplegia are, as previously mentioned, the bilaterally enervated muscles escape, the arm is more usually and severely affected than the leg, the extremities show a strong tendency to later contracture, the muscles do not show evidence of degeneration nor do they atrophy, muscular hypertonus is observed in the paralyzed extremity. Paralysis resulting from extra-pyramidal cerebral hemorrhages shows a tendency to rapid recovery. Immediately after the onset of the paralysis the tendon reflexes are usually abolished and the muscles are flaccid, the effect of shock. But if there be hypertonus, with exaggerated reflexes and spastic muscles immediately after the attack, we are justified in suspecting a hemorrhage into the lateral ventricle, which is a very grave and usually fatal condition.

There are a few atypical forms of hemiplegia worthy of mention: In addition to vascular lesions causing hemiplegia, we have tumors and inflammations; but in some cases of hemiplegia a postmortem examination reveals no evidence of pathologic change; this is called hemiplegia *sini materia*, and is not infrequently seen in nephritic patients dying of uraemic poisoning.

The so called lacunar hemiplegia is caused by small lesions; the result of softening secondary to capillary hemorrhages.

Some cases of homolateral hemiplegia have been reported. In these cases the paralysis is on the same side as the cortical lesion. Improper pathological investigation is doubtless responsible for some of these reports; but there have been a few well authenticated case reports in which there was a failure of the pyramidal tracts to decussate.

Disturbances of speech are valuable in intracranial localization. These are of two kinds, the anarthria and aphasia. The anarthria form, or disturbance of articulation, is due to lesions of the nerves governing the muscles of speech. A typical form is seen in bulbar palsy and pseudobulbar palsy. The aphasias are motor and sensory. In motor aphasia the patient cannot translate ideas into the form of words. In sensory aphasia the power to understand speech is lost. The motor speech center is in the posterior portion of the inferior frontal convolution. The sensory speech center is in the middle and superior temporal convolutions. When the motor speech center is lost the power of expression is lost. If the sensory speech center be destroyed the power of understanding is lost; whereas, if the lesion affects both centers, we have complete aphasia. Motor aphasia indicates a lesion of the posterior inferior portion of the frontal lobe on the left side in right-handed people, and *visa versa*.

Sensory aphasia indicates a lesion of the

middle and inferior temporal convolutions on the left side in right-handed people, and *visa versa*.

Visual disturbances are frequently of much value in intracranial localization. Destruction of the optic tract peripheral to the chiasm causes complete blindness in one eye. If the lesion be in the mesial portion of the chiasm, as in the case of tumors of the hypophysis, hydrocephalus of the third ventricle, dilation of the infundibulum, and empyema of the sphenoidal antrum, it destroys the decussating fibers which come from the nasal portions of the retinae, causing bitemporal heteronomous hemianopsia. Aneurism of the internal carotid and gummatous foci at the base may cause destruction of the external fibers of the optic decussation, giving nasal hemianopsia; and the destruction of one-half of the chiasm causes a nasal hemianopsia on the side of the lesion, and temporal hemianopsia in the opposite eye; nasal hemianopsia on the side of the lesion, and temporal hemianopsia in the opposite eye also result from lesions of the optic tract posterior to the chiasm.

The primary visual centers, namely, the posterior extremity of the optic thalamus—the pulvinar—the lateral geniculate bodies, and the superior corpora quadrigemina, and of the optic radiation or tractus thalamo-occipitalis. If the lesion is peripheral to the point at which the fibers to the Eddinger Westphal nucleus are given off, pupillary inactivity is observed when a ray of light is thrown upon the affected area of the retina; if central to this point the light reflex is retained.

Lesions of the cuneus, the cortical visual center in the occipital lobe, if the lesion causes complete destruction of the center, gives the same results as lesions of the optic radiation. If the centers are partially destroyed the nasal hemianopsia of the ipsilateral, and the temporal hemianopsia of the contralateral, eye will be incomplete.

The visual center being chiefly upon the mesial surface of the occipital lobe, tumors of the falx-cerebri, or even of one occipital lobe, may by extension of pressure cause complete blindness in both eyes.

Uremia and lead poisoning by toxic action may cause the same result. In complete cortical blindness the pupillary reaction may be retained in both eyes.

Lesions of the visual memory area, or the association fibers, cause mind blindness and object blindness. Lesions of the angular gyrus cause word blindness. Lesions of the superior and middle temporal convolutions, or the fibers passing to them from the quadrigemina, or of the middle corpus geniculatum, may cause complete deafness of the opposite ear; this deafness, however, is but transitory, which indicates that both cochlear divisions of the ear are connected with either side of the brain.

The olfactory and gustatory centers are located in the uncinate gyri; lesions of these centers may cause spontaneous olfactory and gustatory impressions, but the destruction of one area does not cause a loss of sensation of smell or taste.

Apraxia is an interesting and oftentimes puzzling symptom. A patient with apraxia is unable to execute movements with a definite end; he is capable of individual and isolated movements, but has lost the power of coordinating simple movements for the purpose of using objects; he may attempt to smoke his scissors or use his cigar as a toothpick, or write a letter with his pipe. The apraxia center is in the middle frontal convolution, chiefly on the left side; and apraxia is indicative of a degenerative lesion in this area.

Of the basal ganglia lesions, those of the optic thalami are best understood; they are usually circulatory in character. The symptoms are transitory hemiplegia, and disturbance of the various components of sensation.

The optic thalami are the relay stations for all sensory impulses. In the optic thalami there is a regrouping of the various components of sensation; and the majority of the impulses pass through the sensory radiation, the so-called thalamocortical fibers, to the sensory area in the cortex; but those fibers conveying impulses of pain, temperature, and the other affective components of sensation, terminate in the inner nuclei of the optic thalami. The reaction of the organism to affective stimuli is inhibited and controlled by cortico-thalamic fibers.

Lesions of the thalamus interrupt cortico-thalamic impulses, and stimulation of the opposite surface of the body causes an over-reaction; the point of the pin is not felt so distinctly, but the pain is greater than on the nonaffected side. The patient is also distressed by spontaneous pains in the affected extremities. The spatial components of sensation on the side opposite to the lesion are abolished, and the sense of position, location and localization are lost.

Little is as yet known of the functions of the corpus striatum, although Kinnear Wilson has given us a syndrome associated with degeneration of the lenticular nuclei.

Lesions of the hypophysis may cause depression or over-stimulation of the secreting structures, a hyposecretion interfering seriously with body development, and an over-secretion producing acromegaly with enormous development of the hands, feet, tongue and lower jaws.

Tumors of the hypophysis may cause serious disturbance of the functions of adjacent structures. Pressure upon the chiasm causes bitemporal hemianopsia. The three ocular muscles pass close to the hypophysis and tumors of the body may cause their paralysis.

THE ACETONE TREATMENT OF UTERINE CANCER

WITH NOTES ON TECHNIC

REINHARD E. WOBUS, M.D., F.A.C.S.
ST. LOUIS

Unfortunately the vast majority of cases of uterine carcinoma, especially those of the cervix, which are referred to us have progressed so far that their cure is no longer possible. The patients so afflicted were formerly abandoned to their fate until from hemorrhage, cachexia, occlusion of the ureters or a combination of these, they were finally relieved of their suffering by death. Their affliction was shared by those who were compelled to nurse them.

For some years considerable attention has been paid to these inoperable cases, and various methods have been advanced for their relief, among them thermal and chemical cauterization, roentgen ray, fulguration and radium. To Percy belongs the credit of having placed thermal cauterization upon a rational basis, and in selected cases, his form of treatment in competent hands seems capable of doing a great deal of good. By it we can apparently cure some cases which were formerly considered incurable. However, it is not always applicable and requires a great deal of skill as well as common sense, both in its application and in the selection of cases. It is certainly not without danger. Radium, where procurable, is perhaps the best method at our disposal today.

Since Gellhorn, in 1907, first published his experience with the use of acetone in the treatment of inoperable uterine carcinoma his method has been used more or less, both here and abroad, and is mentioned in most recent textbooks on gynecology. Its use is, however, by no means general, and it appears to us that it has not met the popularity which it rightly deserves. When we consider the remarkable results which we have obtained by this simple form of treatment, both at the Barnard Free Skin and Cancer Hospital and in private practice, we wonder why it is not more generally used. The reason for this, it would seem to us, lies in the fact that where it has been tried at all, insufficient attention to the details of technic have often jeopardized the beneficial results which should have been attained. It is the purpose of this paper to point out some of the essential factors in the application of the Gellhorn treatment, a due regard of which is necessary to bring about the desired result.

Preliminary Curettage.—This must be thoroughly and carefully done. The instrument used is a large, sharp, spoon curet, known as Boldt's cancer spoon. It is not a scraping operation as is done for endometritis, but

rather an excochleation or scooping out of the cancer masses which are softer and more friable than the surrounding normal tissues. The curet or "spoon" is gently introduced into the crater and turned on its own axis, like the old-time apple corer. Cancer tissue, in fact, cuts so much like a ripe apple that we have used an apple to illustrate this point (Fig. 1). This is repeated until as nearly as possible *all* the friable cancer tissue has been removed, so that the acetone reaches comparatively healthy tissue, causing a shrinkage and later cicatrization. There is at first considerable bleeding, but this becomes less as we get down to firm tissue and is effectively checked by the acetone.

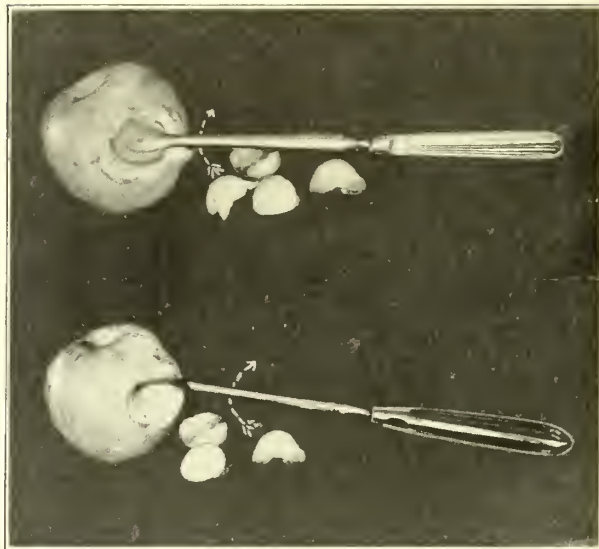


Fig. 1.—Illustrating by means of an apple how the cancer masses are excochleated before applying the acetone treatment.

First Treatment.—This is given immediately after the excochleation. The patient is placed in the Trendelenburg position, a tubular glass speculum is introduced and enough acetone (U. S. P.) is poured in to fill the cavity. This should be renewed at least once as it is diluted by the blood present. I am in the habit of removing it by means of cotton swabs, at the same time cleaning away blood clots and shreds of tissue. As it is usually desirable to get the patient to bed soon, the treatment may be prolonged by packing the cavity loosely with a strip of gauze which becomes saturated with acetone and then removing the excess of the latter. This may be left in place until the following day. To avoid leakage, a cotton tampon well covered with vaseline is introduced as a stopper, after which the speculum is removed.

Subsequent Treatments.—These are usually administered at the doctor's office though circumstances may make it necessary to give them

at the patient's home. They should be commenced a few days after the curettage and repeated every third to fifth day. Later it may not be necessary to give them quite so often.

The patient's hips are elevated and a tubular speculum is introduced after having been coated with a *thick* ring of vaseline near its center. To dilute any acetone which might escape even with this precaution a piece of cotton saturated with water is placed on the

cavity; or the cavity may be filled with gauze which fills with acetone by capillary attraction.

At the end of the treatment the acetone is mopped up with cotton balls, the vaseline covered tampon is introduced, and as the speculum is withdrawn the wet cotton is placed for a few seconds between the labia.

As the cancerous masses reform they should be again removed. However, the more thoroughly they were removed the first time and the more thoroughly the subsequent treatments were carried out, the more slowly will they reform.

If the patients on whom this form of treatment is used had been cachectic from loss of blood and absorption of toxins the effect as a rule is most remarkable. In fact, it is often difficult to convince them that they are not cured and for this reason it is sometimes not an easy matter to persuade them to continue the treatment. There is no question that in many cases these women are restored to their families, perform their regular work and enjoy life for a period of months and sometimes years. However, if the Gellhorn treatment did nothing more than to banish the awful odor which characterizes an untreated case of carcinoma uteri



Fig. 2.—Materials used in the acetone treatment.

perineum against the speculum. While acetone does not irritate the vaginal mucosa, when it touches the perineum or anus it has the same subjective effect that formaldehyde has on an abrasion. Carelessness at this step will in all probability dissuade the patient from taking any subsequent treatments.

The cavity is next mopped dry with cotton balls. The acetone may be introduced by means of a funnel, a syringe, a feeding cup or simply poured from a graduate, *care being taken not to spill any on the vulva*. The patient holds the speculum in place, which should if possible enter the crater. The acetone remains in contact for fifteen or twenty minutes, and should be renewed once if there be any bleeding.

In some cases, especially in carcinoma of the fundus, there may be an angulation of the cavity. This may shut off one part from the other or if open be filled with air. In neither case will the liquid enter and the part to be treated will not receive any acetone even though the speculum be half full (Fig. 3). The same thing may occur where either new masses of cancer have occluded the cervix or the cicatrization has narrowed the entrance to the crater to such an extent that even a smaller caliber speculum can no longer be introduced. In either case, after pouring in the acetone, I use a cotton swab at the end of a uterine dressing forceps by means of which the cavity may to some extent be brought into the axis of the speculum, thus permitting the fluid to enter. It may also be used as a piston to force the fluid into the

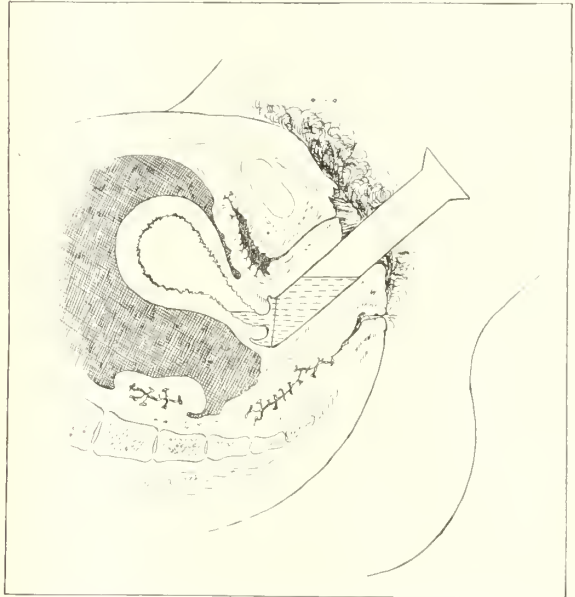


Fig. 3.—Schematic drawing showing how the presence of air within the cavity may prevent the liquid from entering.

(which it certainly does if properly administered) it would deserve the gratitude of the patient, her family and friends, her nurse and her physician, and for this reason alone would deserve to be generally used even in such cases where other methods had been unsuccessfully applied.

626 Metropolitan Building.

THE DOCTOR'S DUTY OF THE HOUR*

INAUGURAL ADDRESS OF THE PRESIDENT

ELSWORTH S. SMITH, M.D.
ST LOUIS

Ill deserving indeed should we be of the greatest honor within the gift of the medical profession of this great city of St. Louis and the largest medical society in this grand commonwealth of Missouri, should we not be tonight deeply and profoundly impressed, not only with the solemnity of this occasion, but also with the great obligations and responsibilities closely linked with the chair which through the past history of our society has seated such beacon lights in local medical history as Beaumont, Engelman, Linton, Johnson, Hodgen, Gregory, Smith, Boisliniere and Mudd, each and every one of whom, together with many others of our illustrious ex-presidents, whose names time will not permit the mentioning, have stood for whatever was noble and best in our chosen calling. And it is well in approaching any undertaking to thus pause to take one's bearings; so here at the very threshold of the New Year may we not with profit halt for a moment that we may recall the objects and purposes which our renowned predecessors had in mind in establishing this our St. Louis Medical Society of which we are all so justly proud.

This medical body of ours was created through an act of the General Assembly of the State of Missouri, approved January 25, 1837, to incorporate the Medical Society of the State of Missouri. Later this charter was amended through the petitions of Bernard G. Farrar, Hardage Lane, McCabe and others, by the General Assembly of the State of Missouri, changing the title of the organization to the St. Louis Medical Society, which act was approved February 6, 1851.

In article II of our constitution we read that the object of this society shall be the advancement of the medical and collateral sciences. In furtherance of this end, the society shall endeavor to bring into one organization the physicians of the city of St. Louis, so that by frequent meetings, and full and frank interchange of views, they may secure such intelligent unity and harmony in every phase of their labor as will elevate and make effective the opinions of the profession in all scientific, public health, material and social affairs, to the end that the profession may receive that respect and support within its own ranks and from the community to which its honorable history and achievements entitle it, and with other county medical societies to form the Missouri State Medical Association, and with other state asso-

ciations to form and maintain the American Medical Association. Having thus retraced our steps to the starting point of our honorable forefathers, we find definite guide posts to mark our travels into the future.

These are first, that the essential paramount reason for our existence is the advancement of the medical and collateral sciences. Every other consideration must therefore be secondary and entirely subservient to this great object. And while it may be true that in order to house this fundamental concept, it may be necessary for us to acquire property and administer same; still we must never permit for a moment the hearth in our gilded palace to be deprived of the ever-burning torch of Science. Our constitution further charges us with securing such intelligent unity and harmony in every phase of our labor as will elevate and make effective the opinions of our profession. Hence must we ever recall that while in the administration of our organization rivalry and competition may necessarily enter at times within our ranks, such rivalry and competition should always be liberal and sportsmanlike and never savor of political bickerings and selfishness,—and above all, we should never stray so far from the grand constitution of our forefathers as to permit the organization, which they have handed us undefiled, to fall into the grasp of designing cliques and political rings, resulting thereby in the rank and file of our members actually parting, so to speak, with their birthright. And at this very moment in the world history, when there are being questioned those sublime words of Lincoln, "Government of the people, for the people and by the people," does it behoove us, my medical brethren, to foster and guard that unity and harmony in every phase of our efforts, so strongly pleaded for by the wise physicians in the past while framing our constitution. For we find ourselves today face to face with the most stupendous and merciless world conflict ever chronicled in the history of man, the end to which unfortunately cannot as yet be scanned even by the most far-seeing eyes. The result, however, it would seem cannot be far distant and then right must triumph over might,—the victory must be ours. But to win we must present to the enemy a united, unbroken front in every arm of our military service, infantry, cavalry, artillery, aviation, medical. And the last named branch is no less important than the other four, for is it not an historical fact that whole armies have been rendered impotent by contagious diseases? How necessary also, is it not, that the highest possible percentage of those incapacitated by receipt of injuries in action be returned to the front at the earliest possible moment? So you must realize that an efficient medical corps is

* Read before the St. Louis Medical Society, Jan. 5, 1918.

not only a necessity from a humane standpoint but from an economic one also, and this latter phase of the question is what we fear the people of our nation have not as yet thoroughly grasped.

The pressing duties then of our Society at this serious moment as we see them are mainly those we bear to the flag of our country. And how are we to meet them? Simply by each and every one of us offering ourselves freely to our country. There should be established some such system as is employed in the draft, except the word "voluntary" should replace "compulsory." There should be in the hands of every medical man in this nation some form of questionnaire in which could be set forth his medical capabilities, and especially his aptitude for some particular line in medical work; at the same time then, of course, could be also stated his dependents, both as to his family, his patients in his community, his present war activities as a teacher of medicine, participation in the medical section of the Council of National Defense or the various medical draft boards. Through close affiliation of the county, state and national medical organizations with the Medical Section of the Council of Medical Defense, correct and complete data of each and every medical man in these United States should be placed at the instant disposal of the Surgeon-General to be utilized according to his experience and judgment. This voluntary offer of each medical man to his country would have certain advantages over the one who requests to be commissioned, because under the former arrangement the government would not in a way have forced on it some men ill-qualified—while having on the other hand not only the best of the profession to choose from but the choice could at the same time be made highly selective, the best man be placed in the place best fitted for him.* Until some such scheme may be resorted to it behooves all of us to give our undivided and loyal support to our auxiliary medical defense committee of St. Louis, and through it to the medical section of our state committee of national defense and council of national defense. Putting aside in this hour of the nation's peril and need all personal feelings and misunderstandings, every physician in a position to do so should under present conditions at once join the Medical Reserve Corps.

Those less fortunately situated and obliged for good reasons to remain, at present at least, at home should try in every possible way to be doing their bit, as teachers of medical students,

participation in the various activities of the draft, or through education to induce others to join the medical corps. Also seconding all efforts to place the rank of the medical man on a higher plane, thereby not only increasing his efficiency but to make his position the more attractive to possible aspirants. The longer this gigantic struggle lasts the more sad aftermath must meet the physician's eye—we have in mind the work of reconstruction, mental, physical, vocational.

These then, my friends, are the burning problems that must confront us and if this terrible war lasts much longer, there will not be one of our medical fraternity forced to remain at home who will have from a few to many soldier patients to care for.

There are in this land of ours approximately 150,000 physicians, one-third of whom for various reasons are not available for military duty; but of the remaining 100,000 about 16,500 have commissions in the services of the Regular Army, Medical Reserve Corps and National Guard. Of these, 12,000 are men on active duty, 2,000 are physically incapacitated or not available because of various reasons. This leaves about 14,500 medical men actually in service or available for service, a number hardly sufficient for an army of 1,500,000 men. And if the war continues it is estimated that we will as soon as possible have at least 3,000,000 men in the field; we will the need at least 30,000 medical officers for the hospitals in the field alone on the estimated basis of ten medical officers to every 1,000 men, to say nothing of the clearing and base hospitals and hospitals devoted to convalescents and reconstruction work—so that the war demand for the medical man is tremendous. While Missouri ranks thirty-three from the standpoint of the number of her medical sons in service as compared with the remaining states in the Union, still up to the last census she had only made up 11.5 per cent. of her quota of 20 per cent. for the medical corps of our army. St. Louis still lacks between twenty and thirty men of reaching her quota. It should be the solemn duty therefore of our Society to aid in every way in this recruiting of medical men by every means in its command. Our committee on health and public instruction, together perhaps with other special committees created for the purpose, should give wide publicity to this crying need of our nation for medical officers in our army. The medical society, too, as we view it, should be considered as a great postgraduate school of medicine, where its members should not only acquire purely scientific knowledge but should be educated in all matters pertaining to the public good. On our program committee there should devolve just now at least the presentation of

* Since writing the above Major Luedde informs me that Colonel Noble has just recommended to the War Department that every medical man be examined physically and if found physically sound, that he be enlisted and commissioned and his name placed at the disposal of the Surgeon-General and should sufficient members not be obtained in this way then that the scheme be placed on compulsory basis.

every phase of the duties¹ of the medical man to his country in these stirring times, as well as every phase of the life of the army surgeon. Then it should be the duty of organized medicine to throw all its power and strength behind the Dyer bill,—a bill presented by our Congressman Dyer in the House, and now pending and which will probably be acted on as soon as the appropriation bills for the ensuing fiscal year are settled. This bill provides for the increase in rank and pay of the medical officer in order to place him on the same plane of rank as the line officer. We have only to briefly contrast our Spanish war with the Russo-Japanese struggle to appreciate to the fullest the value of this bill—as you will recall the death rate from disease far exceeded the mortality from wounds in our late war with Spain while just the opposite result was obtained in the war between Japan and Russia. And why? Simply because in the Spanish war our medical officers, due to inferior rank, had very little authority in matters pertaining to even purely medical matters, in many instances their opinions not having been even considered by the commanding officer, and the ravages of preventable diseases, such as smallpox and typhoid fever, resulted; whereas our little swarthy oriental brethren, appreciating to the fullest the economic value of medical science they had acquired from the Europeans and Americans, applied this same scientific knowledge far more effectively than we did ourselves, and clothed their medical officers with powers and rank equal to their line officers with the resulting marvelous low mortality from disease as shown in their records of the war. This Dyer bill therefore should and must be passed if organized medicine is able to accomplish its passage and we should be equal to the task, if Congress, the Secretary of War and even the President are intelligently informed of its great value and necessity to the nation. If necessary our Society should assist in the organization of a delegation of representative men of the country, and present this matter directly to the President. For through such legislation alone will it be possible for the medical officer to enjoy that respect and confidence of the line officer as to make effective the application of the grand and wonderful accomplishments of modern preventive medicine as applied to our army, and to surround our fighting men, ready to lay down their lives in defense of their country, with every safeguard against preventable disease is obviously the solemn duty of our government.

But the United States Government owes to her soldiers yet another most serious obligation. For all those men in government service escaping death but returning incapacitated through

wounds received in action, should and must be rehabilitated. Efforts along these lines are now well under way in France, England and Canada and are being given consideration in this country. It is not enough to heal the soldiers' body wounds, but his mental traumas must also be carefully treated and his brain power fully restored when possible where it has been shattered by the shocks and horrors of war; his deformities must be adjusted—in a word, he must if possible be restored as a useful member of society. This movement contemplates also the removal of slight impediments in those rejected by recruiting officers, on account of hernia and other remedial defects. This sort of work has been begun at St. Luke's Hospital in New York City. Also at the College of Physicians and Surgeons in Philadelphia, and the American Hospital and Training School for Nurses in Chicago. Also a hospital of 3,000 beds is to be built for the same purpose in Chicago. And we understand that a hospital for this work is now under contemplation here in St. Louis. This work of rehabilitation involves two distinct branches, the one of reeducation, and this is therapeutic in character, or in other words, through various forms of treatment, hypnotism suggestions, various apparatus, etc., the individual is taught again to use his disabled arm or leg, for instance. The other division of this work is vocational, that is, through industrial arrangements the individual is placed in the way of doing some work different from what had been his life work and for which he has become incapacitated by his injuries—and through one or the other of the above methods the soldier patient is made a useful member of society once more. It is estimated that 70 per cent of the Canadian soldiers returning from the front can be benefited by further treatment. Here unquestionably those medical men forced to remain at home will soon have unfolded to them ample opportunities to do their bit, and it shall probably seem wise to have appointed amongst our members one or more special committees to exploit and assist in the organization of this useful work, which possesses both charitable and economic phases.

After touching thus briefly on a few of the serious problems that will confront us during the coming year, you will readily understand our stating at the outset our thorough realization of the serious responsibilities besetting our pathway—and utterly unequal would we feel to approach alone such a herculean task.

Only through the assistance derived from the work accomplished by our able predecessors in office, combined with the entire cooperation of our official family, coupled with the support of our fellow members, could we ever expect to meet the serious problems just presented and

others that will undoubtedly arise as time rolls on.

But of this you may rest assured, that coming as we do with absolutely free hand we shall bring and dedicate to our task the best that is within us to the end that through the help of our fellow officers and members, the best interests of our organization may be completely conserved in an honest effort for a clean administration devoted primarily to scientific medicine, in which sufficient attention will be paid to the science of military surgery, that we may each and every one of us do the more effectively our bit in the attainment of that most desired of all goals, and which every true American feels must be reached at all hazards and which is the WINNING OF THE WAR, saying, with Fitz-Green Halleck:

"Strike until the last armed foe expires.
Strike for your altars and your fires.
Strike for the green graves of your sires,
God and your native land."

Humboldt Building.

INDICATIONS FOR RADICAL MASTOID OPERATION IN CHRONIC SUPPURATIVE OTITIS*

W. D. BLACK, M.D.
ST. LOUIS

The subject your secretary has selected for me is one which is of immense importance to the general practitioner, for he is often in doubt as to the method of treatment to carry out or recommend to the patient. This subject is not a new one, as the radical mastoid operation was first given to the profession about seventeen or eighteen years ago, and has been improved in the last few years so that today it is one of the classics of surgery.

It will be impossible to present the subject in detail, nor do I think it necessary, but simply to try and formulate some general rules by which you can decide upon the advisability of whether the case is one for operative procedure or not.

Before beginning I think it will be of some interest to describe in a brief manner the essential anatomic differences between the simple mastoid, the conservative, and the radical operations.

The simple mastoid operation means that the opening in the mastoid bone must be to the mastoid antrum for drainage of the middle ear, besides removing all of the infected cells of the mastoid, and treat as an open wound until healing takes place.

The conservative, or modified radical, is similar to the above except that the posterior meatal wall is removed to the antrum, also external attic wall, and a flap made from the skin lining of the posterior cartilaginous wall of the external auditory canal; while the radical mastoid operation means opening to the mastoid antrum, removing the bridge, removing the malleus and incus, curetting the carious area and tympanic end of Eustachian tube, and making the flap form the posterior wall of the cartilaginous canal, and treating the case afterward through the enlarged meatus instead of through the posterior auricular wound, which is closed.

The indications for the radical mastoid operation can be divided into two classes: immediate operation and deferred operation.

1. Immediate operation in cases of suppuration when we have severe and dangerous complications, such as otitis brain abscess, epidural abscess, cerebellar abscess, thrombosis of lateral sinus, extensive cholesteatoma, beginning symptoms of meningitis of otitic origin, sudden facial paralysis, or labyrinthitis, or labyrinthine irritation.

2. Deferred operation. In cases of chronic suppuration which after thorough medicinal treatment such as irrigations, applications, powders, gauze wicks, suction, etc., combined with surgery through the canal when required, that fail of a cure after two or three months, the radical operation will be necessary. Surgery through the external auditory canal means the removal of polypi, granulations, removal of external attic wall (if necrosis or caries of attic is present), ossiculectomy, curetting carious areas. In regard to removal of the ossicles (malleus and incus) I will say that while in practically all cases of chronic suppuration the ossicles are diseased, I would not advise their removal except where just the stumps remain. In many cases the ossicles will regenerate if the drainage from the antrum and attic is good.

We enlarge the perforation when necessary for good drainage, or make a counter opening in the vibrating membrane when the perforation is small in Shrapnell's membrane, and clear out adenoids and diseased tonsils. Ear discharge exuding from the external auditory canal often gives us an idea as to the chronicity of the case under treatment, and whether the mastoid cells are involved. Pus from an ear with bone ulceration and caries has a peculiar, strong odor. This in itself is not diagnostic of caries, but when found with denuded bone in the region of the posterior and upper wall of the deep canal (external auditory) would be sufficient for diagnosis of necrosis of probably vast extent and call for the complete operation.

A chronic suppurating ear which discharges

* Read before the Southeast Missouri Medical Association, October, 1917.

profusely (this will also apply to acute cases) and which after thoroughly cleansing the canal of pus, immediately refills, makes us suspicious that the quantity of the discharge was more than the middle ear cavity could hold, and would indicate that the mastoid cells were involved without any signs over the mastoid bone itself. This symptom is not common but when positive means temporizing therapeutics are of no avail and the radical operation indicated.

Decreased Hearing in Chronic Suppuration.—Should the hearing in the ear affected grow progressively worse and the discharge continue regardless of treatment, I think the radical operation should be done, provided the hearing in the other ear is good. Should the patient's hearing be poor in both suppurating ears, I would then operate upon the one in which the hearing was the worse and await the outcome as to the hearing in that ear before operating on the other. Should the non-suppurating ear be affected by chronic catarrhal inflammation or one of otosclerosis and the hearing much decreased, the question of doing a radical mastoid would have to be weighed carefully, as many patients hear much worse one year after the operation. While the above statements hold good for about 50 per cent. of cases, in the others the hearing is sometimes much better and in others no worse. It is in such cases as above mentioned that it is sometimes, depending upon the extent and duration of the suppuration, that the so-called modified radical operation often offers the best chance for hearing and should be tried first.

General Symptoms in Relation to the Radical Operation.—Pain is often absent in chronic suppuration, but should it occur either within the ear or over mastoid or over side of head in an otherwise quiet, suppurating ear, it would be an indication of poor drainage somewhere; even if the canal was patulous, perforation large and clean, I would not hesitate to advocate a radical operation.

Headache.—Here again we find that when of otitic origin it is most often the result of poor drainage plus septic absorption and is referred generally over side of head of the affected ear; or it may be frontal or even occipital. Headache being a common symptom in so many affections one should be very careful not to couple it with ear disease when it is probably due to something else. A valuable aid in determining whether headache is of otitic origin is to elicit from the patient whether the headache is less when the discharge increases or vice versa.

Fever and Malaise.—Fever in chronic suppuration is seldom found except when the pus is not draining well and would decrease when

drainage is established. Mastoid swelling and tenderness or edema would be conclusive evidence of inflammation and pus in the antrum and cells, and would call for an immediate radical mastoid operation.

Vertigo.—This symptom, like that of fever and headache, is of decided value, provided one can be sure of its aural origin. If nystagmus or ataxia accompany it in a patient who has never had it before one would naturally look to the region of the ear for the trouble and the labyrinthine tests might be of immense value.

The Radical Mastoid Operation and Life Insurance.—Applicants with chronic suppuration of middle ear are rejected by all good companies owing to the great risk of fatal complications, but they will pass such applicants after the radical operation has been properly performed, even should the ear continue to discharge mucopus occasionally.

CONCLUSIONS

1. The main object of the radical mastoid operation is the saving of life.
2. Conservation of hearing when audition becomes gradually worse in chronic suppurative otitis.
3. Cessation of the discharge.
4. Relief of intermitting aural headache.
5. Improvement in general health.

219-223 Metropolitan Building.

CHRONIC INDURATIVE PANCREATITIS *

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MEMPHIS, TENN.

The specimen I am presenting today is one that has been in my possession since July 1, 1910, and removed by operation from one D., aged 40, who was a holdover, and was inherited by me when I came on the service on that date at the Memphis City Hospital. D. had been operated on for gallbladder disease or gallstones some weeks before and was drained. He had not obtained relief of his symptoms. I made a conjectural diagnosis of chronic pancreatitis and did an exploratory operation. In coming down to the site of the gallbladder, it was found that this organ had been removed, and there were few loose adhesions. A mass was lying across the abdomen when the stomach was pulled up, which stood up and out perceptibly, and on palpation was found to be as hard as wood or bone. This was determined to be the pancreas and on the extreme density of the organ the diagnosis

* Read at the Sixteenth Annual Meeting of the Frisco System Medical Association, Springfield, May 28, 29, 1917.

was changed from that of chronic pancreatitis to that of malignancy—possibly scirrhus.

The patient's age, a fair degree of emaciation, and the general tacies were not entirely incompatible with such a diagnosis. The absence of fat-necrosis, hemorrhagic areas and abscess eliminated from the consideration acute and subacute pancreatitis. Accordingly a pancreaticectomy was decided on.

The gastrocolic route was chosen to gain access to the gland. Great difficulty was encountered in delivering the gland for the purpose of applying clamps and ligatures. And in the process of manipulation some of its contents were evidently squeezed out and the density of the organ was somewhat lessened. When this was noticed—the head and body and nearly all of the tail of the pancreas had been cut loose—it was decided that this part of the tail of the gland might be left in situ for the advantage that might be derived from the remaining islets of Langerhans and their internal secretion.

Here I again wavered in my diagnosis and wondered if the diagnosis of chronic (indurative) pancreatitis was not, after all, the probably correct one. The specimen was misplaced and overlooked and a pathologic report was never had, and recently it was submitted to Dr. Herbert Brooks, who rendered a verbal report of a general fibrosis.

The ducts and blood supply were tied off with medium braided pedicle silk and the cut end of tail of the pancreas was closed with mattress sutures on a broken needle of the same material. A Mikulicz drain was placed in the bottom of the operative field and brought out through the incision in the abdominal wall which was in the median line.

The patient made a rapid recovery and put on weight, and to all intents and purposes appeared as well as any other successful and satisfactory abdominal operation. He left the hospital in about thirty days in good condition, to resume his occupation as a laborer, and I have not seen or heard of him since.

Now what are some of the points of interest and lessons that may be learned from an experience of this kind?

In an operative procedure such as the one under discussion, how shall one interpret *induration*—woody hardness?

Let us review cancer, the effect of steapsin on the structures of the pancreas, chronic indurative pancreatitis, and chronic circumscribed pancreatitis.

Cancer is the most important and frequent of the new formations of the pancreas. In the light of our present knowledge it is perhaps to be considered the most common disease of the pancreas. The view is undoubtedly correct, though at present not capable of proof, that cer-

tain affections of the pancreas—diseases of the blood vessels, circulatory disturbances, inflammations, catarrhal processes in the excretory ducts, atrophy, fatty degeneration, tuberculosis, etc.—occur much more frequently than has been recognized on account of defective investigations.

The relative frequency of cancer to other diseases of the pancreas is probably about the same as in other organs, in which cancer certainly does not assume the highest statistical importance. Carcinomata are more rarely overlooked than other affections, which perhaps are recognizable only on microscopic examination which is generally omitted.

The only statistics are of little value, in consequence of the chronic inflammations having been confused with scirrhus.

Remo Segrev collected the cases of pancreatic tumor in the Ospedale maggiore in Milan during nineteen years, and found 32 cases in 11,500 necropsies—127 carcinomata, 2 sarcomata, 1 syphiloma and 2 cysts. Biach found in 18,069 necropsies in the Vienna General Hospital: 1,270 carcinomata, 22 pancreatic carcinomata; 5,065 necropsies in Weidener Hospital showed 514 carcinomata, 6 pancreatic carcinomata; 477 necropsies in Rudolph's Hospital showed 221 carcinomata, 1 pancreatic carcinomata. Therefore among 23,611 necropsies there were 2,005 cancers, of which 29 were in the pancreas. Thus we have 8.5 per cent. of cancers, of which 1.5 per cent. were pancreatic cancers.

The primary cancer of the pancreas is certainly much more rare than the secondary variety, but primary carcinoma of the pancreas is by no means a rare disease. Friedriech collected only fifteen cases. In statistics published in 1893 by Mirallie, 113 cases of primary carcinoma of the pancreas are reported. He eliminated all cases from consideration in which a cancer was found at the same time in any other organ, since it would render doubtful the primary origin of the tumor; he excluded also those cases in which he was unable to get any detailed account. It may certainly be assumed that among the cases excluded by Mirallié there were some which were primary, for metastases after primary carcinomata of the pancreas are by no means infrequent. Up to 1896, six additional primary cancer of the pancreas have been added. Vienna General Hospital shows from 1885 to 1895, thirty-two cases of primary cancer. From the beginning of 1896 to July, 1897, thirteen cases of primary cancer of the pancreas are shown in the literature.

Seat of Neoplasm.—The head of the gland is the most frequent seat of the neoplasm—(Ancelet) 200 cases collected without discriminating between the primary and secondary forms.

Among 73 cases of primary and secondary cancer of the pancreas collected by Biach, the head was affected 19 times, the body 13 times, and the whole gland 31 times.

Mirallié writes: "In general, the head of the pancreas is the seat of the disease."

The Vienna General Hospital reports: "Among 32 cases of primary carcinoma it was found in the head in 20 cases, twice in the body, 3 times in the tail, and once in the entire gland."

Cancer Body of Pancreas.—Leriche reports 3 cases of his own and collected 16 from the French literature.

Finney collected 16 cases of primary tumor of the pancreas. He also did practically a total pancreatectomy when he removed a benign cystadenoma—where there was just a little normal granular tissue at head and tail.

Kellerman reports 121 cases of carcinoma; of these 75 were men and 46 were women.

The causative factors of cancer here as elsewhere are entirely hypothetical—unknown. But it is said by Prof. Leopold Oser of Vienna (Nothnagel's Encyc.): "Carcinoma is the most important and frequent of the new formations of the pancreas; and in the light of our present knowledge it is perhaps to be considered the most common disease of the pancreas; and if one remembers the palpable density of the fibrous cancer one may without much more thinking arrive at a diagnosis of cancer."

The Effect of Steapsin on the Structures of the Pancreas.—Murphy says under date of Dec. 8, 1915 (Clinics, Vol. 5, No. 3): "Examination, however, is more suggestive than the history. Across the abdomen there is a mass of infiltration which is as hard as wood, as though malignant. *Acute infection of the pancreas liberates steapsin, and this fat-splitting ferment gives rise to a wood-like induration which simulates carcinoma.* The diagnosis in this case is not cholelithiasis, therefore, but pancreatitis, or a *neoplasm* which is producing the obstruction to the bile-ducts and giving rise to jaundice." Murphy's operation on the case was primary exploratory. This particular phase of chemico-pathology is peculiar to Murphy and was not hitherto recorded, so far as I know. It would, admittedly, have been of great assistance as a diagnostic aid in the case of the writer.

Chronic Indurative Pancreatitis.—There are two groups of this condition—namely, chronic indurative pancreatitis originating from the blood vessels (hematogenous variety) and chronic indurative pancreatitis originating from the excretory ducts.

Chronic indurative pancreatitis originating from the blood vessels: (a) Indurative pancreatitis, due to endarteritis obliterans. The blood vessels of the pancreas are very frequently affected in the arteriosclerotic and endarteritic processes taking place throughout the body.

Hyperplasia of the connective tissue occurs and the usual secondary changes, such as fatty degeneration, hemorrhage, and atrophy follow.

According to Hoffe-Seyler: "The blood vessels first become diseased, their walls thickened, their lumen narrowed or obstructed. In consequence there are disturbances of nutrition in the parts supplied by them, notably thickening of the connective tissue around the gland acini and degeneration and disappearance of the gland cells. The interacinous fat tissue increases in proportion to the disappearance of gland tissue; indeed, it becomes so excessive that the pancreas is reduced almost to a mass of fat which may be larger than the normal pancreas.

(b) Chronic indurative pancreatitis from syphilis: An increased growth of connective tissue occurs very frequently in syphilis. This is especially found in the congenital variety. Most of the cases are reported from the literature of syphilis in infancy and childhood, the pancreas in some cases being twice the normal size, white and shiny, firm in consistence, and the structure almost or entirely gone.

Microscopically the "interstitial tissue was found so greatly increased that the acini appeared to have entirely disappeared, and the organ seemed rather an actual fibroid than a gland." The conditions obtain in a very much smaller way in the adult.

(c) Chronic indurative pancreatitis from alcohol: Hyperplasia of the stroma of the pancreas is quite as possible from chronic alcoholism as it is in the liver or kidney and needs no further discussion here.

Chronic indurative pancreatitis originating from the excretory ducts: (a) From inflammation of the excretory ducts (sialangitis pancreatica). This variety may be the more frequent and has the same etiology as the acute (suppurative) inflammation. It may develop in connection with any process which favors the immigration of micro-organisms, especially with cholelithiasis and cancer.

In this connection Riedel says that there is a severe inflammatory process in the head of the pancreas, which leads to the formation of a large tumor and an enlargement of *iron-like* density develops in suspicious spot. This may last for months and years.

(b) From closure of the excretory duct: Obstruction of the excretory duct from any cause produces enlargement of the ducts in the gland and destruction of the gland cells and a consequent hardening of the interstitial tissue of the organ. Pawlow tied the duct of Wirsung in rabbits. The histologic picture runs like this: "The cells of the tubules are diminished in size, and interstitial increase of connective tissue occurs, beginning in the greatly dilated ducts

and extending between the tubules, gradually assuming extreme proportions and causing the destruction of a portion of the secreting parenchyma, etc. A similar process occurs in man after closure of the duct of Wirsung."

Chronic Circumscribed Indurative Pancreatitis.—The condition is described as a local affection of the pancreas, secondary in time and cause and due to extrinsic influences, such as ulcer of the stomach or duodenum or other inflammatory processes in the neighborhood of the organ.

We see from the foregoing that there are several and varied causes of induration of the organ under discussion, any one of which might lead one astray.

How shall one *treat* these conditions?

Cancer.—Pancreatectomy; partial pancreatectomy. Nothing short of complete removal of the cancerous tissue will avail. The approach to the pancreas is of too serious import to do palliative work. The total extirpation of the pancreas was undertaken and accomplished by Francke, his patient living five months.

Frequent operations for partial pancreatectomy, removal of the tail and part or all of the body, have been successfully done. Even part of the head of the pancreas has been removed with relief of symptoms and cure. The objection to the total extirpation of the gland is the fear and danger of limiting or cutting off the blood supply to certain neighboring organs. For instance, in this procedure, the gastroduoderal artery would be cut and a gangrene of duodenum would supervene. Therefore one proposing to do the operation of complete removal of the pancreas must undertake at the same time a resection of the duodenum or the so-called pancreatoduodenectomy. This operation has been performed several times; how successfully deponent sayeth not. We are also to avoid injury to the superior portal vein, injury to the superior mesenteric vessels, which is followed by gangrene of the small intestine, and injury of the right colic artery, which is followed by gangrene of part of the colon. The operation of my old friend and college associate, Coffey, of Portland, Ore., is apparently ideal. This author and operator has also improvised an ingenious operation for disposal of the stump of the pancreas in partial pancreatectomy in his pancreato-enterostomy.

Induration from Steapsin.—Murphy drained his case by cholecystomy.

Chronic Indurative Pancreatitis.—Drainage by cholecystostomy or cholecystenterostomy. This is especially indicated where gallstones in the gallbladder or biliary tract are antecedent and are the cause of the chronic pancreatitis. Where no stones are present, and the etiologic

and exciting factor are outside the biliary tract, a more permanent drainage is demanded and a cholecystenterostomy is probably the operation of choice.

In those cases where an earlier cholecystectomy has been done serious difficulty is encountered where it is desired to drain for chronic pancreatitis. Mayo has found it necessary to do a secondary drainage of the common duct.

If the purview of this contribution touched on acute pancreatitis we would have seen that pancreatic leakage is not the deleterious factor it has been thought to be, and that normal gastric juice is inactive, being alone. When the pancreatic juice is *activated*, as by associated ferments, from the bile or from the duodenal mucous membrane—enterokinase; from this latter trypsinogen is converted into trypsin. When these agents get into the pancreas enzymes are given off and fat necrosis occurs.

The pancreas has been injured many times without the occurrence of fat necrosis. Therefore the pancreatic leakage without fat necrosis in my case is further evidence that if these activating influences may be avoided surgery of the pancreas is freed of one of its greatest objections and becomes a more inviting field.

61 Porter Building.

PREPARATION AND USE OF THE CARREL-DAKIN ANTISEPTIC SOLUTION*

MILLINGTON SMITH, M.D.
OKLAHOMA CITY

During the past few months much has been written concerning the Carrell-Dakin antiseptic solution which is being used so extensively in wound sterilization in the war zone. Remarkable results have been obtained. The surgeons of our own country find that this solution is of equal value in open wounds encountered in civic life and in the industries. We have been using the preparation in our local hospitals for the last eight months and have obtained some remarkable results.

In the numerous articles that have appeared in our journals on this subject great stress has been laid on the methods of application. Dr. Carrel says that 40 per cent. of its value depends on the care that is used in its application. Not so much has been written concerning the technique of its preparation, which is of no less importance. Very briefly I wish to mention the formula and points which must be observed in order to obtain a solution of greatest value.

* Read at the Sixteenth Annual Meeting of the Frisco System Medical Association, Springfield, May 28, 29, 1917.

This antiseptic is an aqueous solution of sodium hypochlorite of a concentration not less than 0.45 per cent. nor more than 0.5 per cent. Clinical experience proves that under 0.45 per cent. its bactericidal effect is not the best, and over that it is irritant. The formula that laboratories have found to give a solution nearest correct is the following:

Chlorinated lime..... 200 gms.
Sodium carbonate 80 gms.
Sodium bicarbonate (dry).. 100 gms.

Our laboratories have found that the majority of brands of commercial chlorinated lime contain not 33 per cent. of available chlorin, as is official, but from 24 to 25 per cent. Of course, if the lime has a higher percentage of available chlorin than 25 per cent. a smaller amount of the lime must be used.

Put into a twelve liter flask the 200 gm. of chlorid of lime and five liters of ordinary water; shake vigorously for a few minutes and leave to macerate for five or six hours.

At the same time dissolve in five liters of cold water the carbonate and bicarbonate of soda. After the maceration of the lime mix the soda solution with it and shake thoroughly. Leave stand until the calcium carbonate which is precipitated is settled out. Siphon off the supernatant liquid and filter. This liquid is the finished product.

On account of the variation of commercial products, it is best to standardize the finished product. This procedure is one that any druggist of technical training can do. Our laboratories have checked up products prepared by our local druggists and have found them very satisfactory. For an explanation of the technique of the standardization I shall refer you to the December number of the *Southern Medical Journal*, 1916, or the December 2 number of the *American Medical Journal*.

Action of the Solution. How does this solution act as an antiseptic? How strong a bactericidal agent is it? Why is it a better antiseptic than Labarraque's solution, which many of you used so extensively a few years ago? How does its action differ from alcohol, bichlorid of mercury, peroxid of hydrogen and other antiseptics are questions which are interesting to all of us.

We are frank to say that we are not definitely able to state wherein its bactericidal power lies. It has been proven to the satisfaction of many chemists and bacteriologists that its action is due to two substances. Sodium hypochlorite is a very unstable compound. When it comes in contact with the carbonic acid of the necrotic tissue nascent chlorin is liberated which in turn

reacts with the water of the tissues, liberating nascent oxygen, which is a very active oxidizing agent, destroying the bacteria by the simple process of oxidation.

Some of the salt is not broken down until it has well penetrated the pus and necrotic tissue, as it must come in contact with carbonic acid before the nascent oxygen is liberated. This preparation acts as a bactericidal agent just as the chlorinated lime acts which you use in the sewer. It is an antiseptic of high bactericidal activity and of little toxic and irritating quality. It has marked pyocytolytic power, being able to dissolve pus, blood-clots and necrotic tissue. The living tissue is not affected by the solution.

It differs in its action from hydrogen peroxid inasmuch as hydrogen peroxid is so unstable that its oxygen is liberated before the solution penetrates very deeply.

It differs from Labarraque's solution inasmuch as the latter is alkaline in reaction, which neutralizes the carbonic acid, thus preventing the liberation of the nascent oxygen.

Its action differs materially from alcohol and mercuric bichlorid, as the action of the latter two is that of destroying the bacteria by coagulation. At the same time the pus and tissue debris is coagulated, interfering with drainage. Part of the antiseptic power of this solution lies in the fact that hypochloritis coming in contact with protein material forms complex compounds known as chloramins, which have marked antiseptic properties. It is upon this principle that Dr. Dakin has prepared his so-called chlorazine antiseptic tablets, which can be bought on the market at the present time. These tablets are stable and from them the antiseptic solution can be made. However, for hospitals the solution made up from the chemicals as has been described is much more satisfactory, as it is much cheaper. The actual cost of the material used in the solution is about twenty-eight cents for five gallons. Where a laboratory is accessible the time spent in the preparation of the solutions is not very much.

Application. Concerning the technic of the application of this solution, as carried out by Dr. Carrel, you have no doubt read the extensive articles that have appeared in the *American Medical Journal*, *Journal of Surgery*, *Gynecology and Obstetrics*, *Southern Medical Journal* and others. The preparation has not been used in this country very much, but where used it has proven that the technique is just as applicable to the treatment of wounds encountered in civic life as in war.

Dr. Noland, the chief surgeon of the Tennessee Coal and Iron Railroad Company, says that

in his service the use of mercuric chlorid, iodin, iodin and benzin, alcohol and similar antiseptics for the early and late treatment of wounds has been entirely abandoned and all classes of open wounds are treated with Dakin's solution.

Fresh wounds are cleansed with gauze soaked in the solution and all minor wounds are put up in wet dressings of the same. This dressing is thoroughly moistened every two hours, by the patient if he is treated in his home, or by the nurse if he is treated in a hospital. One precaution which must be taken is to see that the skin surrounding the wound is protected with vaseline, as the antiseptic is irritating to the skin. Burns of all degrees are treated in exactly similar manner. More serious and deep wounds, especially those involving bone and joint, are treated by the installation method.

We have found in our experience with the solution for the past eight months that infected wounds, even where deep-seated cavities are involved, are quickly sterilized if the technic is carefully observed, i. e., if the tubes are so arranged that every portion of the wound is reached at two-hour intervals. We have had several cases of hands that have been severely torn and macerated and severely infected, which under the treatment have healed with wonderful rapidity and with a small amount of scar formation.

From my experience with the solution and from the experience of some of my colleagues I have been convinced that we have obtained results which we never have been able to secure with other antiseptics.

ELEPHANTIASIS ARABUM: A CASE FROM PRACTICE

Reminiscence of an Old Physician

OTTO A. HARTWIG, M.D.
ST. LOUIS

In presenting this case to the members of the State Medical Association I wish it distinctly understood that it is not for the purpose of making propaganda for myself or for anybody else who advised or assisted me, but simply that I think these cases are sufficiently rare in our climate that every physician in the state has a right to take a look at the photos, believing that a good photograph of a rare condition will leave a better impression on our minds and memory than a half dozen didactic lectures delivered on the same subject.

When this case occurred I was a comparatively young physician and not by any means a *prima vista* diagnostician, having been gradu-

ated only one and a half years, and if in describing this case I may not always use the language of the most elegant savant, I shall at least try to express myself according "to the growth of my beak."

It was in the fall of 1881. I was sitting in my office, "waiting" like Mike McCawber for "something to turn up," when Mrs. F., a married woman who formerly had lived in the neighborhood of my office, entered and requested a consultation and examination, saying at the same time that she was very poor and could not pay anything for my services just then. ("Another charity case," I thought.) All right, state your trouble. She then said that she was pregnant, advanced about six or seven months, and that even before she became so she had noticed a gradual swelling and enlargement of her privates. She had used hot and cold water and all sorts of medicinal washes, but now she could stand it no longer as the parts felt very raw and irritated. Examination revealed a condition exactly as here represented by the accompanying photographs.

Now, here was something I had never seen before, something out of routine practice, something "that my philosophy had never dreamed of." Indeed, it was a sight most hideous to behold; the enlargement was fully the size of a large baby head, weighing about four or five pounds (by guess), the network of the epidermis torn here and there, and the whole of it, every part and surroundings, covered by an ugly yellowish-white slime. Being slightly rattled, I aimed to keep my balance. However, I told her I would help her if she would allow me to have a photograph taken of the parts. She gave her consent immediately. I ordered the parts to be kept very clean with hot water and soap and after drying to be powdered with stearate of zinc and well suspended until further notice.

The photos were obtained in a few days; an anterior and posterior view were taken and printed in duplicate. One pair of the pictures I donated to the Missouri Medical College Museum and the other two are here presented for illustration. When the pictures were secured I called on Dr. H. Tuholske and he, after looking at the pictures, at once expressed himself by saying, "You have a very rare, well developed, generally tropical case of disease, but which occasionally makes its appearance even in our latitude; it's a case of elephantiasis of both labia minora." I told him that it was complicated by a six or seven months pregnancy and maybe by some odd manifestations of lues. He only said, "Perhaps so. What are you going to do about it?" I think it ought to be removed, was my answer. I told Dr. Tuholske that it was a charity case and he said,

"Never mind, I'll help you out." "Thank you, Doctor," was all I said.

From the old college I stepped over to Olive street to the house of Dr. G. M. B. Maughs. I explained my case to him and asked him whether it would be safe to amputate the whole affair at this stage of the pregnancy. He took another look and then the old gentleman broke out in his high voice: "And if she miscarries in consequence of the amputation, you are liable to be held responsible for causing a premature



Fig. 1.—Anterior view.

birth!" and he looked at me very seriously. I smiled at him in return and said: "Not at all, Professor; my object is to make the woman carry her child to full term. As it is, she is in constant misery. If nothing is done for her she'll go half crazy until her confinement; at best, the delivery would be a very, very sloppy affair, especially if I should find it necessary to use forceps for the delivery." Maughs thought for about a minute or two, and all at once he shot a question at me: "Has the enlargement a pedicle?" I told him that the mass and skin above was very hard and tense but that perhaps by making strong traction on the bulk we might be able to produce a short pedicle. "Well, well," said the kind old gentleman. "Do what you think is best; operate or don't operate, I'll see you out anyway; but remember, you are very liable to have severe hemorrhage." I thanked the Doctor and left. The question of Dr. Maughs, "Has the enlargement a pedicle?" at once put a whole illuminating plant into my brain. I went down town speculating in my mind on how to control the hemorrhage. I called on my patient on Franklin avenue, near Eighteenth street, made another examination, took a measure of the pelvic crotch from the mons veneris to the fourchette, guessing at the circle-part-curve. I at once entered a common brass foundry and, according to my own drawing, had a two-bladed clamp constructed and nickel plated, the same which I herewith pre-

sent and donate to the St. Louis Medical Society.

When the day for the operation arrived Dr. Tuholske was otherwise busy, but he very courteously sent me Dr. Dixon, then his clinical assistant, who brought along Dr. Tuholske's thermo-cautery for use if needed. Antisepsis was still in its infancy, and a 2 per cent. carbolic acid solution and plenty of hot water was all we used. Chloroform was used as anesthetic. As soon as the patient was under the anesthetic Dr. Dixon made strong traction on the bulk of the mass; thus a short pedicle was produced, about one-half inch thick and about four and one-half inches broad. I put the clamp in situ, close up to the pelvis; the curve was just right. Before the nuts were tightened the tissue in the clamp was stretched from above downward and properly evened out, then the nuts were turned down on the tissues tight. With an ordinary pocket case scalpel I made a clean cut, starting at the height of the vestibule down to the fourchette following the convex front of the clamp, thus amputating both labia at once. After the removal there was no hemorrhage to speak of except in one spot on the left side, a deep-seated plexus of capillary veins sent out quite a little stream. By using the thermo cautery the bleeding ceased at once. Interrupted silk sutures were inserted about two thirds of an inch apart, a small lint compress soaked in 2 per cent. carbolic acid solution was inserted between the lips to prevent opposite adhesion, a larger piece of carbolized



Fig. 2.—Posterior view.

lint to cover the vulva, and a T bandage with a fenestrated flap was applied. When using the thermo cautery, the patient came very rapidly from under the anesthesia and complained of the burn. I gave her one-fourth grain of morph. sulph. hypodermically and let her go to sleep. When I examined the specimen a rich yellow-white cream was flowing from every pore, every connective tissue cell, as well as the

follicles were soaked and enlarged to the utmost, even the papilla on the mucous surface took part in the process. In handling the specimen for about five minutes it dwindled down from the size of a baby head to the size of two small fists, its contents were nothing but cream; cream?—no, properly speaking, lymph, if you please. The time consumed in removing this large and sloppy lymphedema or elephantiasis arabum from a pregnant woman was, all told, about twenty-five minutes; had I not had the clamp, the cutoff would have been zigzag, very uneven and untidy.

On visiting my patient the next morning, I found her in very good condition—no fever, no pain. Examining the supposed broad condyloma around the anus, I found them much less tense and partly shriveled up. On tapping several of them with a hollow exploring needle, only a drop of an almost clear serum exuded. Nevertheless, I applied every day with a camel's hair brush, Hebra's solution, HgCl_2 , ten grains to one ounce of alcohol 95 per cent. On

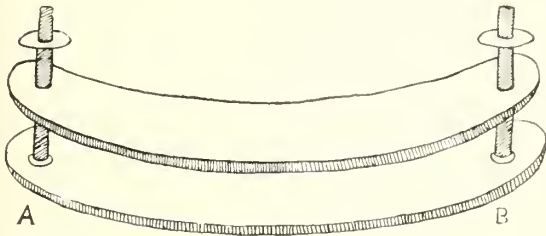


Fig. 3.—A, solid screw post; B, solid screw post soldered in.

the third day all sutures were removed, everything healed rapidly by first intention, in a week the flat bullæ around the rectum cleared up entirely. Mrs. F. was glad and so was I, because now the "*Janua Coeli seu Inferno*" was once more restored to a respectable looking outlet for the coming of a new citizen or citizeness. Mrs. F. wanted me to attend her in the coming confinement. Having in the meantime learned that Mrs. F.'s pregnant state was not due her real husband, but to her present employer. I told her I would attend her provided she would pay for the confinement in advance. I had forgotten all about her; later on I heard that she employed a midwife, left the old man for whom she was housekeeper, and also left the city and took up her residence in some part of Illinois on the farm of a relative.

It seems to me that this clamp could more often be used, not only for external skin formations, but, when remodeled to suit the individual case, by shortening the solid standing screw posts, and also by different nuts which protect the free end of the screw posts from scratching and injuring adjoining tissues. However, I leave that to the judgment of better surgeons

than I am. It seems to me the operating surgeon could, even in the abdominal cavity, control large parts of bleeding tissue temporarily—do his work and then attend to the hemorrhage. The clamps of different sizes should be fenestrated.

Perhaps it would now be proper to say a few words of the pathology of elephantiasis arabum, but British writers have covered the field so well, owing to their splendid opportunities in India, Africa and China, that it seems almost like carrying "owls to Athens or coals to Newcastle" to add another word. Many etiologic factors are given, such as endemia, sea air, fish diet, hot climate, and perhaps heredity, and here I would mention that Dr. Richards of East India states that out of 236 patients 73 per cent. had one or both parents affected. This brings us down to infection, and the guilty parasite is called *filaria sanguinis hominis*, which is present in the blood of many but not all cases in very large numbers. Now histology teaches us that wherever there are capillary veins there are also capillary lymphatics intimately connected with veins by a very minute button-shaped opening grown into the walls of the veins (Strecker Gewebe). Now it is said that the *filaria sanguinis hominis* destroys the connection between the veins and lymphatics, thus being cut off from their regular channels into the veins, the lymphatics are free, become dilated and discharge their contents into surrounding tissues, especially into the interspaces of the connective tissue cells and the process of forming a lymphedema is by simple gravity at once established. Time and lymph leakage will do the rest.

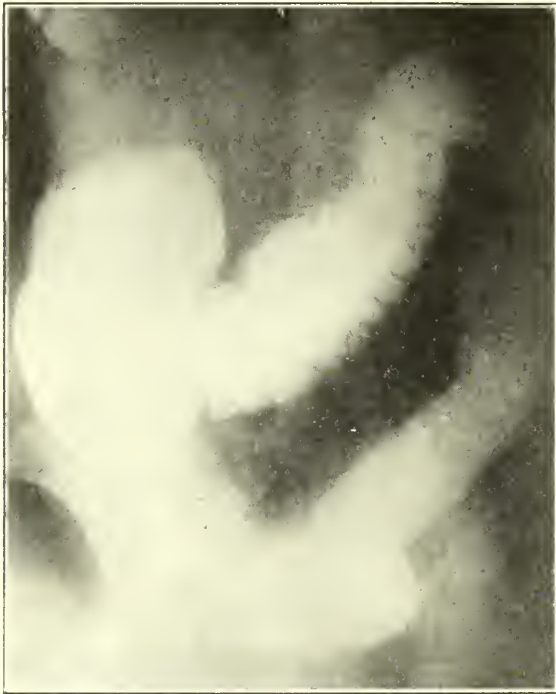
Let us, for the sake of argument, transfer this process of leaking lymphatics from the location of the genitals or legs (the seat of ordinary noncontagious elephantiasis arabum) to other parts of the human body, for instance to the lungs, large or small lymphatic glands, or any other organ where the chances of infection from much more serious infectives than *filaria sanguinis hominis*, for instance, the bacillus tuberculosis or the so highly renowned spirocheta pallida, the gonococcus, or the pus-producing germs like the streptococcus or staphylococcus or some other violently infecting germ was present, and where the general nutritive tissue metamorphosis was most favorable for spreading the infective germs. How many more conditions or original causes of disease we might be able to explain, perhaps without being able to do much good, unless we cut down and stop the leak. But I must stop writing. I am getting into fantastic theorizing, and *what we want is facts!* (Boz), absolutely facts, especially in medicine.

3908 Cleveland Avenue.

FIFTEEN DAYS' COLON CONTENTS COATED

E. H. KESSLER, M.D.
ST. LOUIS

During December, 1917, Miss S., 53 years old, was referred to me by Dr. Otto Sutter for examination. The patient walked into my laboratory and gave me the following history: She had always felt well and was now feeling about normal. She said her bowels had not moved for fifteen days. Over the phone Dr. Sutter told me that he had tried laxatives, cathartics and enemas for ten days, without result. Because the patient felt fairly well and had enjoyed good health without the loss of weight or discomfort, and because constipation had never been troublesome, carcinoma was not seriously thought of until the past



Fifteen days' colon contents coated by drinking a dose of barium mixture.

few days. There had been some vomiting but not bothersome. Under fluoroscopic examination the entire colon could be seen as a dark mass much enlarged. There was no gaseous distention in the intestines. I ordered enemas of warm sweet oil without result.

As an experiment I gave a glass of barium mixture to drink. Twenty hours later I again examined the patient and found the barium had coated the entire colon contents. By giving a barium clyisma I could go within an inch of the fecal column. I was then enabled to see the filling defect in the sigmoid at about the rectal junction. Two days later the patient was operated on at the Lutheran Hospital and the diagnosis of carcinoma verified.

I mention this case because I find no such case recorded. The surprise to me was that the barium should coat a fifteen days' colon content in about twenty hours.

3446 Shenandoah Avenue.

THE YALE MEDICAL SCHOOL

President Arthur Hadley of Yale University announced on February 22 to Yale men who had returned for alumni university day that the Yale Medical School, for the first time in the 104 years of its existence, possessed an endowment sufficient to insure its perpetuation and establish it in the fore rank of American medical schools.

Since June, 1914, as reported in the *New York Tribune*, the resources of the school of medicine have been increased by \$2,568,812.55. This sum is exclusive of \$266,075 donated for the exclusive use of the Yale Mobile Military Hospital in France.

The gifts to the school of medicine include \$125,000 for the Anthony N. Brady Memorial Laboratory and an additional pledge of \$500,000 for endowment from the Brady family, provided a total of \$2,000,000 more was obtained.

Toward this \$2,000,000 the General Education Board had promised the last \$500,000. The Lauder family have given \$400,000, the late Charles W. Harkness \$100,000, and numerous other contributions had brought the total sum above the amount needed.

Five years ago it seemed probable that the Yale Medical School would cease to exist. Despite the fact that it was then just ready to celebrate its centennial, its total endowment was less than \$400,000, a sum insufficient to provide income to pay the salaries of professors.

The question of the continuance or discontinuance of the medical school was placed in the hands of men interested in Yale University. A committee consisting of the late Dr. Lewis A. Stimson, Dr. D. Bryson Delavan, Dr. William B. Coley, Dr. Joseph A. Blake and Dr. Walter James was asked to confer on ways and means with President Hadley, Dean Blumer of the medical school, and three members of the Yale corporation.

The status of the school itself was first taken into consideration. In the face of many difficulties it had maintained so high a standard that it was ranked "Plus A," the highest class, by the American Medical Association. If the school was to continue, the conferees decided, first, it must maintain the same standards it had set. Most important, if this was to be done, was an affiliation with a hospital for teaching purposes. A second consideration insisted on by the Yale corporation was that the mere question of pride on behalf of the university should not impel the continuance of the school. There must be a real need for it, recognized by the medical profession at large, or else it would be discontinued. This need was found to exist. The generosity of the family of Anthony N. Brady made the affiliation with the New Haven Hospital possible.—*Science*.

MILK AND THE CHILDREN

It is the duty now of every individual community to see that its children have milk of good quality and in sufficient amount to assure their normal development. To do this the price of milk must be controlled or fixed, and the milk supply to infants and children carefully safeguarded. The malnutrition of our children was, even before 1914, a serious national problem and one demanding urgent attention. Poverty and ignorance of dietary essentials have been ever-present factors in the malnutrition of the young and war conditions can not fail to increase the gravity of the situation and the difficulties of maintaining the health of the Nation.—*Bulletin*, Federal Children's Bureau.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

APRIL, 1918

EDITORIALS

JEFFERSON CITY MEETING

The Sixty-First Annual Meeting of the Missouri State Medical Association will convene at Jefferson City, May 6, 7 and 8. The new capitol will furnish the place of meeting and a large number of our members will have their first view of this beautiful structure. Hotel headquarters will be at the New Central Hotel. This building has been very considerably enlarged during the past two years and contains more than one hundred rooms. Members desiring to reserve quarters for the session should make their reservations early.

Jefferson City always attracts a good attendance whenever the annual meeting is held there, and we believe this year's session will be no exception to that rule, notwithstanding the absence of many members whose devotion to the welfare of the organization has been as conspicuous as their loyalty to the country in this period of national danger.

The preliminary work of the program committee indicates that an interesting variety of excellent papers are being prepared for the occasion and they will unquestionably arouse much profitable discussion.

The House of Delegates will meet as usual on the first day of the session and the scientific program will begin on Tuesday, May 7. The complete program and final announcements will be published in the May JOURNAL.

MAINTAINING MEMBERSHIP OF THOSE IN ACTIVE SERVICE

That the war would somewhat interfere with the regular progress of medical organization was to be expected, but it is gratifying to note that the members generally are well convinced that the vigilance of county and state associations must not be relaxed in pursuit of the purposes of the organization. While it is true that a great many of our members have enlisted in the service of the country, it is also true that this temporary absence from civil practice and home ties has not noticeably affected their interest in the county and state associations. A comparison of the number of members who have paid their dues for 1918 with the number who had paid their dues in 1917 on March 20 shows that 1918 has kept pace with 1917.

Many of the men who have entered the service have already paid their dues for 1918, and the sentiment among the county societies generally is in favor of remitting the dues of those who wish to accept this courtesy and pay the state assessment for them out of the county society treasury. This has already been done by the following county societies: Benton, Buchanan, Clark, Greene, Howell, Linn, Livingston, Pemiscot, Pettis, Platte, St. Louis County, Wright-Douglas.

Such action is in harmony with the spirit that has moved the county societies in nearly all the state associations throughout the country to pay the state dues of members in active service. It is in harmony with the spirit of sacrifice that must grip every true physician, not only in his professional relations with his patient, but in dealings with fellow-physicians. The burden of expense upon any one county medical society is comparatively light when the county remits the dues of its members and pays the state association out of its treasury, but the sum total of loss to the state association would seriously embarrass the activities of the organization if the entire loss should fall upon the state association. The executive committee discussed this question at its last meeting and decided that payment of the state assessment for members who have joined the colors and are in active service could not be exempted by any action of the executive committee because only the House of Delegates can change the by-laws or suspend their operation. Maintenance of the state organization is of the greatest importance to each individual member of the association, because it is through the state association that the personal and collective interests of the profession are safeguarded.

PROFITS ON MEDICAL OFFICERS' UNIFORMS

Releasing the grip of the unscrupulous dealer in foods and supplies is one of the tasks thrust upon the government by the cupidity and avarice of a certain class of merchants whose greed for gold smothered all instincts of patriotism in their small souls. Almost every day we read of stores being closed for varying periods of time because their owners had violated the regulations established for the protection of the people against profiteering, fraud and deception, and the government has very properly limited the profits on certain manufactured articles; but there is one form of profiteering that has fallen especially heavy on the officers of the Medical Reserve Corps without there having been, as far as we have heard, any attempt to curb it. We refer to the high prices that doctors in the Corps must pay for their uniforms and equipment.

When we entered the war the government had a supply of uniforms and other necessary articles to outfit the medical officer which were sold at very reasonable prices at Army stores, but the stock was very quickly exhausted and since that time officers have been compelled to purchase their equipment from the retail merchants. The prices immediately soared to limits that closely approached a prohibitive figure for some of the doctors who had joined the colors, and the report of a committee of the St. Louis Medical Society which recently investigated this matter says the cost still remains needlessly high. According to this report, the retail merchants assured the committee that uniforms and equipment required by officers were sold on the basis of 10 per cent. profit, but the committee was unable to verify this statement because none of the merchants offered to prove their assertions by showing the wholesale cost of the goods. The committee found, however, that the prices of ready-to-wear uniforms ranged from \$22.50 to \$40 for melton and from \$25 to \$50 for serge, but the cost to civilians for corresponding grades of clothing was one-third less than these amounts in spite of the fact that civilian suits contain three pieces while officers' uniforms have only two pieces. For tailored uniforms, made to measure, the prices range from \$30 to \$75, while suits for civilians made from the same kind of material could be bought for from one-third to one-fourth less.

On the prices for puttees and shoes the committee learned both the wholesale and the retail rates and was told by retail merchants that the goods were sold on a 10 per cent. profit basis, but the committee's investigations demonstrated that 100 per cent. profit was nearer the truth. Puttees that retailed for \$20 cost \$10 wholesale; a pattern that never sold for less than \$12 cost the retailer \$4.50 to \$7. Officers' shoes—not long boots—retailing at \$16 cost wholesale never more than \$9, while shoes ranging from \$8 to \$16 retail cost only \$4.50 to \$8 wholesale. A graphic illustration of the large profits retailers demand from medical officers was included in the report as follows: An officer of the Medical Reserve Corps purchased through a friend in the wholesale trade a complete outfit for \$56. The outfit consisted of the following articles and the prices ordinarily charged are appended to show what the retail merchants seem to regard as a legitimate "10 per cent." profit:

One melton uniform.....	\$22.50 to	\$ 40.00
One serge uniform.....	25.00 to	55.00
One heavy overcoat.....	40.00 to	45.00
One cap	3.50 to	4.50
One pair puttees.....	8.00 to	10.00
Total	\$99.00 to	\$154.50

The "10 per cent." profit on \$56.00 in this case ranged from \$43.00 to \$98.50.

We do not believe the merchants of St. Louis are any different from their kind in other parts of the country, and therefore it is probable that the same condition prevails throughout the nation. If such is the case the question assumes proportions of sufficient importance for governmental inquiry. If the exorbitant prices are being charged by St. Louis merchants only then the St. Louis Medical Society would perform a creditable service if it would push the inquiry further and make an effort to compel retail merchants to reduce their prices or, failing in this, to ascertain where its members who enter the Corps could purchase their uniforms at more reasonable rates in some other city.

WHAT CONGRESSMEN SAY ABOUT THE OWEN-DYER BILL

The Secretary of our Association wrote to senators and congressmen from Missouri informing them that our Association had indorsed the provisions of the Owen-Dyer bill to increase the rank of members in the Medical Reserve Corps and requested them to support the passage of this bill. Replies have been received from Senators Stone and Reed and seven congressmen. We append excerpts from these letters showing the attitude of the congressmen who have thus far given us their views on this important measure:

I will be glad to give your suggestions careful consideration when this bill is before the Senate.

JAMES A. REED.

I thank you for your views, and assure you that this matter will have my careful consideration.

WILLIAM J. STONE.

I know of no reason why the Dyer Bill should not be favorably acted on, and will be glad to give it my attention in the light of the views expressed by your Association.

WILLIAM P. BORLAND.

I am not a member of the committee that will consider this bill, but I shall be very glad to do what I can to secure prompt and favorable consideration.

WILLIAM L. IGOE.

The bill will have my hearty support. Will further say that you may count on my support of any measure which tends to make the Medical Corps of the Army more efficient, because I want to see this particular branch of the service the most efficient possible.

JACOB E. MEEKER.

From what I know of this measure I feel certain that it will have my support.

THOMAS L. RUBEY.

I know of no reason why it should not pass. I shall be glad to give it my support.

JOSEPH J. RUSSELL.

I am glad to give this matter my careful attention, and to have your views.

CHAMP CLARK.

I am referring your letter to the chairman of the Committee on Military Affairs, expressing that it is your request that the committee report the "Owen-Dyer Bill" with favorable recognition.

J. W. ALEXANDER.

This bill will receive my support.

P. D. DECKER.

A NEW REVIEW ON WAR SURGERY

There has just been prepared in the office of the Surgeon-General a new pamphlet, *Review of War Surgery and Medicine* (March, 1918, vol. i, No. 1). According to the editorial note, this review is to appear monthly and to be devoted to abstracts of war medical literature. This little pamphlet will furnish the medical personnel of the Army abstracts of original papers of importance, necessary information in a short compass, and prompt publication of reports which otherwise might not gain circulation.

In this first volume there is a splendid review of surgery in the zone of advance prepared from data written by Major George de Tarnowsky, based upon his personal observations in the French army front. It is the best description that has yet appeared in American literature of the war.

This is followed by a most readable and instructive review of the most recent data on gas gangrene, trench foot and the general principles guiding the treatment of wounds of war.

Copies of this review may be obtained by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C., enclosing ten cents in stamps.

This review should be in the hands of every officer of the Medical Corps and should be of interest to the entire medical profession not in the service. The reviews are very well written and make most interesting and profitable reading.

WORTH COUNTY MEDICAL SOCIETY REORGANIZED

Dr. G. W. Whiteley, Councilor of the Third District, reports the organization of Worth County Medical Society, March 3, 1918, with five members as follows: Dr. J. D. Dove, Allendale; Dr. C. F. Johnson, Sheridan; Dr. W. E. McKinley, Grant City; Dr. J. K. Phipps, Grant City, and Dr. P. J. Ross, Grant City. Officers for 1918 were elected as follows: President, J. K. Phipps; vice-president, C. F. Johnson; secretary-treasurer, P. J. Ross; delegate, W. E. McKinley; alternate, J. K. Dove.

AMERICAN JOURNAL OF OPHTHALMOLOGY

Ophthalmologists throughout the country will undoubtedly profit by the new *American Journal of Ophthalmology* which incorporates several well edited periodicals devoted to ophthalmology. The combination of the journals and the incorporation into one publication is

due largely to the efforts of Dr. Edward Jackson of Denver, Colo., who becomes editor of the new publication. The new journal replaces seven separate publications, namely, *American Journal of Ophthalmology*, *Annals of Ophthalmology*, *Ophthalmic Record*, *Ophthalmology*, *Ophthalmic Year Book*, *Ophthalmic Literature*, *Anales de Oftalmologia*. The first issue appeared in January and contains seventy-six pages of original articles, editorials and miscellaneous matter, four pages of ophthalmology literature, giving titles of important papers published in other journals, and sixteen pages of "Digest of the Literature." Among the original articles is one by Dr. J. Ellis Jennings of St. Louis, on "Aneurysms of the Retinal Arteries." The editorial staff includes Drs. Adolph Alt and Meyer Wiener of St. Louis. The advertising policy of the Journal will adhere to the standards established by the American Medical Association concerning therapeutic preparations and "along all lines only reputable firms and institutions that can be relied on to make good their promises will be admitted."

OBITUARY

JOHN M. BERRY, M.D.

Dr. John M. Berry of Webster Groves, a member of the St. Louis County Medical Society, died at his home February 25, 1918, after a prolonged illness, age 62 years. Dr. Berry was graduated from the Washington University Medical School in 1878 and immediately thereafter established himself in practice at Webster Groves, where he continued until his death.

ALFRED M. TOWNSEND, M.D.

Dr. Alfred M. Townsend of Kenoma, Mo., a graduate of the Ensworth Medical College, 1893, and a member of the Barton County Medical Society, died at his home after a prolonged illness, February 24, 1918. Dr. Townsend was a nephew of the late Dr. E. A. Donelan of St. Joseph, with whom he practiced for a few years after his graduation. He then moved to Kenoma, where he remained until his death and was highly respected and esteemed.

SAMUEL ALLEN JOHNSON, M.D.

The Greene County Medical Society adopted the following report of a committee appointed to submit resolutions on the death of Dr. Samuel A. Johnson:

Dr. Samuel Allen Johnson was born September 15, 1863, at McLean County, Kentucky.

He received his education in Louisville, Ky., and in Laclède County, Missouri. In 1888 he graduated from the Kentucky School of Medicine at Louisville, later coming to Springfield, Mo., where he practiced until 1895. At that time he was elected assistant physician at the State Hospital for the Insane at Nevada, Mo. This position he held for six years. After severing his connection with the State Hospital he continued his practice for a time at Nevada. He was married to Dora W. Allen, October 8, 1901.

Dr. Johnson distinguished himself as one of the leading neurologists of the state. After pursuing this line of work for a number of years at Nevada, he came to Springfield six years ago and founded the Johnson Sanitarium. He demonstrated his ability as a specialist in nervous diseases by his rapidly growing and successful work in placing the sanitarium beyond the experimental stage. This institution is a monument to his energy and skill. Dr. Johnson possessed a positive yet pleasing personality and those who differed from him could but respect and admire him. His amiable, gentle spirit won hosts of friends both among the medical fraternity and the laity. He was a warm advocate of organized medicine, being a member of his County, State and District Societies, and a Fellow of the American Medical Association. At the time of his death he was delegate from Greene County Medical Society to the annual meeting of the Missouri State Medical Association. He always attended these societies and took an active part in the proceedings, both presenting papers and discussing those read by other members, and was alive to the best interests of his profession. On November 25, 1917, he fell, a martyr to the cause for which he was devoting his splendid manhood and professional skill, by the hand of one of his unfortunate patients. Therefore be it

Resolved, That we deeply deplore the untimely death of our beloved brother and co-laborer. And be it further

Resolved, That in his death the medical profession has lost one of its most devoted, loyal and untiring members; that the community has lost an ideal citizen; that in token of our esteem for Dr. Johnson these resolutions be incorporated in the minutes of our Society and a copy sent to the *Journal of the Missouri State Medical Association* and a copy presented to his wife.

Respectfully submitted,

T. A. COFFELT,
WALLIS SMITH,
LEE COX,

The Committee.

NEWS NOTES

CAPT. FAYETTE C. EWING of St. Louis, Medical Reserve Corps, is in charge of the ear, nose and throat department of the Base Hospital at Camp Beauregard, La.

CAPT. ROBERT E. SCHLUETER, President of our Association, has been transferred from the training camp at Fort Oglethorpe, to the Base Hospital at Camp Hancock, Augusta, Ga.

DR. WM. F. KUHN of Kansas City has donated a large silk American flag to State Hospital No. 4, Farmington, and Dr. Eaton, the superintendent, reports that it is in daily service at that institution. Dr. Kuhn was formerly superintendent of No. 4

The Gasconade-Maries-Osage County Medical Society will hold its next meeting at Hermann on April 18, and has invited the members from Cole and Franklin County Medical Societies to be their guests. Dr. A. Sophian of Kansas City will lecture on serum therapy; Dr. W. W. Graves of St. Louis on some neurological subject, and Dr. Carroll Smith of St. Louis on a surgical topic.

HAVE you sent that binocular, telescope or spyglass to the Navy? The Navy needs 100,000 of these "eyes" to help fight the enemy on the seas. As explained in a letter from the Assistant Secretary of the Navy, published last month, it is impossible to obtain these articles from abroad and our own facilities for manufacturing them are very limited. Send yours to the Honorable Franklin D. Roosevelt, Assistant Secretary of the Navy, Naval Observatory, Washington, D. C.

DURING February the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies: The Abbott Laboratories, Chlorcosane, Barbitol-Abbott, Procaine-Abbott; Dermatological Research Laboratories, Philadelphia Polyclinic, Arsenobenzol (Dermatological Research Laboratories) 1 Gm. Ampules; Eli Lilly & Co., Typhoid Vaccine, Prophylactic, Typhoid Vaccine, Therapeutic, Typhoid Mixed Vaccine, Lilly; Merck & Co., Mercury Benzoate-Merck; Monsanto Chemical Works, Hala-zone-Monsanto; H. K. Mulford Co., Bulgarian Bacillus, Friable Tablets.

DR. WM. R. SUMMERS, until recently assistant physician at State Hospital No. 3, Nevada, has purchased the Johnson Sanitarium at Springfield which was established by the late Dr. S. A. Johnson for the treatment of mental and nervous diseases. Our members will recall

that Dr. Johnson was killed on November 26, 1917, by one of his patients, who struck him on the head with an ax. Under Dr. Johnson's splendid management the sanitarium has become a well known institution and proved a great benefit to the physicians and the people of southwest Missouri. Dr. Summers brings to the institution the experience of several years in our state institutions and special study in mental and nervous diseases.

SOCIAL service necessary because of war conditions and the reconstruction work that must be taken up in every community at the close of the war will be the principal subjects stressed at the forty-fifth National Conference of Social Work to be held in Kansas City May 15-22. Such men as Raymond Robins, in charge of Red Cross work in Russia; Ernest P. Bicknell, Director-General of the Red Cross work in United States; Homer W. Folk, in charge of the department of civil affairs of the Red Cross in France, will have important places on the program. Among the great women speakers will be Mrs. Florence Kelly, one of a committee of three asked by the government to inspect factories where soldiers' uniforms are made and to see that none are made in sweat shops; Maud E. Minor, the only woman member of the New York State Probation Commission and chairwoman of the War Department Committee on the Protection of Girls.

MEMBERSHIP CHANGES, MARCH

NEW MEMBERS

Alpheus B. Allstun, Steele.
 M. J. Armstrong, Buffalo.
 Oscar F. Bradford, Columbia.
 Chas. W. Brown, Campbell.
 Clarence Cardwell, Stella.
 L. R. Colby, Norborne.
 J. D. Dove, Allendale.
 E. N. Gerard, Leonard.
 G. A. Grainger, Caruthersville.
 V. H. Greenwood, Buffalo.
 L. B. Hall, Caruthersville.
 Wm. H. Hines, Kansas City.
 H. A. Hite, Green Ridge.
 F. A. Hudson, Buffalo.
 Nicolas Jaime, Kansas City.
 Chas. F. Johnson, Sheridan.
 B. F. Johnson, Buffalo.
 W. E. McKinley, Grant City.
 T. A. Michie, Tyler.
 I. Phillips, Buffalo.
 J. K. Phipps, Grant City.
 J. R. Pinion, Caruthersville.
 John A. Rusk, Linneus.
 Clinton K. Smith, Kansas City.
 B. W. Vaughan, Urbana.
 W. S. Windsor, Bogard.

CHANGES OF ADDRESSES

L. H. Brammon, St. Louis to Hayti.
 A. F. Bugg, Belle to Corridon.
 W. H. Clithero, 1935 Park Ave. to 600 Carleton Bldg., St. Louis.
 H. C. Crowell, 2600 Forest to 2454 Forest, Kansas City.
 J. B. Cunningham, Alton, Mo., to Hockerville, Okla.
 J. S. Forsen, Alliance to Lincoln, Neb.
 J. W. Haden, Plevna to Shelbina.
 J. A. J. James, St. Louis, Mo., to Pasadena, Calif.
 Geo. W. Jainer, Rayville to Lawton, Okla.
 F. B. Kyger, 815 East 31st St., to 700 East 31st St., Kansas City.
 John Lavan, St. Louis, Mo., to Hicksville, Ohio.
 W. F. McConkey, 4630 Westminster Pl. to 4201 Maryland, St. Louis.
 W. E. Muns, Syracuse to White Plains, N. Y.
 Gustav H. Reinhardt, 5101 Delmar Ave. to 5958 Kingsbury Blvd., St. Louis.
 W. J. Sell, Waynesville to Conway.
 W. R. Summers, Nevada to Springfield.
 Q. A. Tipton, Caruthersville, Mo., to Blythesville, Ark.
 H. Unterberg, 529 Frisco Bldg. to 5929 Ridge Ave., St. Louis.

TRANSFERRED

Russell D. Carman, St. Louis to Rochester (Minn.) Society.
 Heber Robarts, St. Louis to Belleville (Ill.) Society.

WITHDREW

Fred Fahlen, St. Louis.
 C. E. Gibbs, Bowling Green.
 Ernst Mueller, St. Louis.

DROPPED

L. M. Asbury, Dalton.
 E. N. Walker, Grand Pass.

EXPELLED

Chas. M. Chapman, Shelbina.

DECEASED

John M. Berry, Webster Groves.
 A. M. Townsend, Kenoma.

CORRESPONDENCE

COMMISSIONED LAST AUGUST

KANSAS CITY, MO.,
 3821 Harrison Blvd.

To the Editor:—I applied for and received commission in the Medical Officers Reserve Corps last August. Am listed in section of Surgery of the Head, division of Ophthalmology. Have not seen my name among those in the JOURNAL lists. A. C. LEONARD.

MISCELLANY

HIGHER MEDICAL RANKS

It is difficult to understand the contention of the War Department that creating higher ranks in the Medical Corps would "disturb line grades." The bill does not provide that the medical officer of any unit will rank the commanding officer. Its provisions are that there shall be inspecting officers of such rank that they may order such sanitary conditions or other regulations as they deem essential to the health of a unit or a camp. In civilian life "doctor's orders" always go, but in the Army, as experience has often shown, the major surgeon's strongest urging may be unconvincing to the colonel. As long as proposed sanitary regulations are merely recommendations, unless the major surgeon risks friction by appealing to the Surgeon-General, who cannot attend promptly to conditions in every camp, so long may the obstinacy of a colonel permit bad conditions to continue.

This actually happened in many instances during the Spanish-American War. There have also been some avoidable fatalities at the present cantonments because base hospitals were not constructed at the proper time and because of crowding which medical men of the proper rank close at hand would have prevented. The Navy Department has already recognized the need of higher rank for medical men and Congress quickly responded. One of the reasons, not as important as the others but still worthy attention, is that higher medical ranks are common in the European armies and navies. It was to put Pershing on a level with his European associates that he was given the rank of general, against American traditions, and the rank of admiral was likewise revived. The Army surgeons are entitled to the same courtesies, even if there were not more important reasons.—*St. Louis Globe-Democrat.*

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.
 Carter-Shannon County Medical Society, Jan. 9, 1918.
 Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.
 St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.
 Henry County Medical Society, Jan. 24, 1918.
 Moniteau County Medical Society, Jan. 28, 1918.
 Camden County Medical Society, Feb. 1, 1918.
 Scott County Medical Society, Feb. 2, 1918.
 Clark County Medical Society, Feb. 8, 1918.
 Cooper County Medical Society, Feb. 13, 1918.
 Atchison County Medical Society, Feb. 18, 1918.
 Ralls County Medical Society, March 10, 1918.

MISSOURI STATE MEDICAL ASSOCIATION

Sixty-First Annual Session, Jefferson City,
 May 6-8, 1918

PRELIMINARY PROGRAM

ST. LOUIS

Leo Bartels: Title to be announced. W. D. Black: The Operative Indications and After-Treatment in Goiter Surgery. E. Lee Dorsett: Sterility Due to Retrodisplacement of the Uterus; the Non-Operative and Operative Treatment. R. B. H. Gradwohl: What the Laboratory Can and Cannot Do in the Diagnosis of Tuberculosis. Frank Hinchey: Pelvic Drainage in Abdominal Cases. Marsh Pitzman: The Pathology of Appendicitis Considered in Its Relation to Practice. Francis Reder; Remarks on Angiomata, with lantern slides. G. Canby Robinson: Reemployment of the Crippled Soldiers After the War, with lantern slides. F. C. Sherwin: The Hodgen Splint in the Treatment of Fractures of the Femur. Edwin Schisler: Multiple Transfusion with Splenectomy in Pernicious Anemia, with study of a case. Elsworth Smith: Preliminary Observations on Hypertension. R. L. Thompson: Illustrative Lesions of Syphilis as Found in Routine Autopsies.

KANSAS CITY

J. Q. Chambers: Title to be announced. Scott P. Child: Title to be announced. A. W. McAlester, Jr.: A Clinical Demonstration of the Medical Examination of a United States Aviator. George C. Mosher: Title to be announced. Leon Rosenwald: Prostatic Enucleation. Fred. T. Van Eman: Can We Disregard the Calendar in Setting a Date for Labor?

STATE AT LARGE

R. H. Goodier, Hannibal: Title to be announced. E. H. Miller, Liberty: Systemic Effects of Goiter as Observed in Rural Practice. F. G. Nifong, Columbia: The Hodgen Extension Suspension Splint; Its Use Exemplified in Both Civil and War Practice. E. L. Spence, Fulton: Laboratory for Each State Hospital. N. I. Stebbins, Clinton: The Small Hospital in Rural Places; Their Classification and Benefits. Elmer D. Twyman, Independence: Title to be announced.

ST. LOUIS MEDICAL SOCIETY

Meeting of Feb. 9, 1918

The meeting was called to order at 8:45 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read, corrected and approved.

The special order of business was called for, which consisted of a paper entitled, "Problems of Feeding the Young in War Times," by Dr. E. W. Saunders. Discussion by Drs. George M. Tuttle, Jules M. Brady, Edward H. Kessler, Louis C. Boisliniere and Phelps G. Hurford; Dr. Saunders closing.

In the absence of Mr. John E. Mooney, Dr. Seabold presented a report of the Business Bureau and demonstrated with lantern slides the various procedures taken to collect an account.

Dr. Boisliniere and Dr. Kane reported that the entire work in connection with organizing the Business Bureau had been done by Dr. Seabold and that they had simply acted as advisors.

Dr. Kane moved that the gratitude of the Society be extended to Dr. Seabold and to Mr. Mooney and that it be spread on the records of the Society and that a copy be sent to each of these two gentlemen. Carried.

Dr. Booth spoke of the creditable work being done by the Business Bureau.

Dr. George Richter read a paper entitled, "The Physiology and Pathology of the Mediastinum." Discussion by Drs. Louis H. Behrens, Miles B. Titterington, William Engelbach, Alonzo R. Kieffer, Olney A. Ambrose and Elsworth S. Smith.

Dr. Koetter informed the Society that our fellow member, Dr. Edw. Richter, would present a bill before the Board of Aldermen on Friday, February 13, making it a misdemeanor for any one to accept free treatment at a clinic or dispensary who is able to pay for it. Dr. Koetter urged the members to get into communication with their respective aldermen and to give their support to this bill by their presence at the meeting of the Board of Aldermen.

Dr. Kane reported that the Four Minute Men have been asked by the Navy Department to voice an appeal for binoculars, telescopes and spy-glasses to be used to supply men aboard ships so that they may be on constant lookout for submarines.

Dr. Kane moved that the Society communicate with the Four Minute Men inviting them to send a representative to explain the proposition to the Society in detail. Carried.

Attendance 92.

Meeting of Feb. 16, 1918

The meeting was called to order at 8:35 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved. The scientific program consisted of the following: A paper entitled, "Milk Sickness and Report of a Case with Autopsy Findings," by Drs. Edward P. Buddy and Ralph L. Thompson.

Discussion by Dr. J. Y. Greenman of the Missouri Botanical Gardens, Mr. H. G. Bristow, City Chemist, and Dr. Rudolph Vitt, City Coroner; Dr. Buddy closing.

Dr. Kane, representing the Four Minute Men, made an appeal for binoculars, telescopes and spy-glasses to be used to supply men doing submarine work.

Dr. Paul Y. Tupper read a paper entitled, "Uterine Fibroid."

Discussion by Drs. Grandison D. Royston, William H. Vogt, Elsworth S. Smith, George Gellhorn and Samuel E. Peden; Dr. Tupper closing.

Dr. Augustus G. Pohlmann gave a short talk in behalf of the Army Medical Museum and urged the Society to do everything within its power to establish a new Army Medical Museum in Washington.

Dr. Koetter moved that the society communicate with Major R. W. Shufeldt and express its hearty approval of his efforts to establish a Medical and Surgical Museum of the Great War. Carried.

Dr. Koetter reported the passage of the Richter Bill by the board of aldermen by a vote of twenty-four to four and moved that the society extend a vote of thanks to Dr. Richter for his earnest and persistent work in securing the passage of a bill which will do away with clinical and hospital abuse. Carried.

Dr. Richter moved that the society inform Mayor Kiel, to whom the bill will be presented for signature, that the St. Louis Medical Society is heartily in favor of Dr. Richter's bill. Carried.

The secretary read a communication from the War Department, Commission on Training Camp Activities, requesting the cooperation of the society in its effort to dispose of smileage books.

Dr. Koetter moved that a committee be appointed to solicit subscriptions for smileage books. Carried. Attendance 82.

Meeting of March 2, 1918

The meeting was called to order at 8:40 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

Dr. A. Edward Meisenbach demonstrated a specimen of an abscess which he had removed from the right side of the brain in a man 69 years of age.

Dr. Edward H. Kessler read a paper entitled "Demonstration of Fifteen Day Colon Contents."

Discussion by Dr. Francis Reder.

Dr. Ellis Fischel read a paper entitled, "Observations on the Operative Treatment of Fractures."

Discussion by Drs. Willard Bartlett, William T. Coughlin and Francis Reder; Dr. Fischel closing.

Dr. Rutherford B. H. Gradwohl read a paper entitled, "Results of a New Method of Complement Fixation in Gonorrhoea in the Male and Female."

Discussion by Drs. Albert Faller of Cincinnati, George Ives, Charles S. Rehfeldt; Dr. Gradwohl closing.

Dr. Koetter moved that the society express its deep appreciation to Mr. Lacey for the successful prosecution of the murderer of Dr. F. L. Pohlmann.

Dr. Kane offered an amendment to the effect that the circuit attorney, Mr. McDaniels and his assistants, Mr. Feehan and Mr. Weinbrenner, be extended the gratitude of the society for their efforts in securing the conviction of Dr. Pohlmann's murderer.

Attendance 90.

ARTHUR GUNDLACH, M.D., Secretary.

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY

Forty-Seventh Meeting, Monday, Jan. 14, 1918

1. EXHIBITION OF CASES.

A. A CASE OF APPENDICITIS WITH UNUSUAL COMPLICATIONS.—By DR. O. R. SEVIN.

B. J., female, aged 27, was admitted to Barnes Hospital on Dec. 9, 1917, with a history of having been sick for five days. Onset sudden, with pain in lower abdomen and vomiting. Vomiting frequent during the past five days. No blood. No jaundice. Bowels normal. Three children, youngest 11 months old. Patient has not menstruated since last baby. Up to present illness was perfectly healthy.

Examination.—Fairly well developed and nourished. Anemic; hippocratic facies; herpes over both lips. Heart and lungs normal. Abdomen slightly distended in lower half. Respirations costal. General tenderness, most marked in lower abdomen. Definite muscle spasm, most marked over right lower rectus. Percussion note dull in flanks. Shifting dullness.

Pelvic Examination.—General tenderness, extreme, most marked on right.

Temperature 102.2; pulse 128. Leukocytes 20,000. Urinalysis: trace of albumin. Diagnosis: Peritonitis, acute, general, secondary to acute appendicitis.

Dec. 9, 1917. Appendectomy and drainage. Entire peritoneum injected. Appendix adherent to right tube. Free pus. Pelvic organs normal. Culture from pus, pure streptococcus.

Pathologic Report: Peritonitis. No evidence of marked appendiceal involvement.

After operation temperature and pulse gradually rose for five days, then temperature approached normal, only again to rise each afternoon to 101.

December 12. Blood culture—streptococcus hemolyticus.

December 19. Blood culture—streptococcus hemolyticus.

December 25. Blood culture negative.

December 27. Patient developed a left-sided empyema.

December 28. Thoracostomy. Culture from pleural fluid streptococcus.

Patient continued to run septic temperature and on Jan. 6, 1918, a diagnosis of interlobular abscess (right) was made from physical findings and roentgen ray. Thoracentesis in fifth interspace in midclavicular line; obtained pus. Rib resection done; portion of eighth rib in anterior axillary line was removed. Pleura seemed normal and on exploration no pus found. Wound packed wide open. Patient then developed a septic uveitis.

January 10. Eye drained through incision through entire cornea.

January 11. Clamp inserted through thoracostomy wound on right. Large abscess opened. Temperature subsided somewhat and pulse became less rapid. General condition of patient improved. Fourth blood culture negative.

DISCUSSION

DR. SACHS: This case demonstrates how serious at times, appendicitis may be. The extraordinary series of complications this patient has had is of itself of interest, but another feature of the case is very significant, and that is that when the organisms disappeared from the blood the local foci of infection began to appear in various parts of the body. This observation was made a number of years ago by Lippman of New York, that is, a septicemia changed into a pyemia.

B. A CASE OF HYPOPITUITARISM.—By DR. SACHS.

I show this patient because he presents a peculiar form of hypopituitarism. He has the neighborhood symptoms of characteristic temporal blindness in the left eye with complete loss of vision on the right side. There is a certain degree of hydrocephalus but instead of being fat, as most hypopituitary cases are, he is very thin. There is a history of polyuria but we have not been able to demonstrate this while he has been in the hospital. He has never had any sugar in his urine. His genitals are perhaps a little smaller than normal but not definitely atrophic. He shows an extreme degree of convolitional atrophy in the roentgen-ray plate and also shows a large sella turcica with a bony tumor which is apparently growing up into the brain. He has had consistently subnormal temperature, which corresponds to what may be properly called the hibernating type of pituitary disease. This case corresponds very closely to the so-called Lorraine type of hypopituitarism.

C. A CASE OF HEMOPHILIA.—By H. H. HEUSTON.

This case was that of M. F., male, 63 years of age, Austrian, a farmer of Macon County, Mo., who entered Barnes Hospital Oct. 12, 1917, complaining of bleeding from gums and nose. His family history and past history were negative. Present illness dated back to July, 1916, when he noticed small hemorrhagic skin lesions. In September and at intervals later there was bleeding. Treatment at Kansas City Hospital by transfusion and at Barnard Skin and Cancer Hospital by local treatment with adrenalin. The diagnosis at Barnes Hospital was chronic lymphatic leukemia, pyorrhea alveolaris, gingivitis, hemorrhoids, Dupuytren's contracture, and purpura hemorrhagica. Patient left the hospital Nov. 21, 1917, with no clinical improvement.

Physical examination showed general glandular enlargement with enlarged liver and spleen. There were many hemorrhagic spots on the body and there was bleeding from gums and nose. The skin was pale and had a yellowish tinge.

The blood study showed red cells remaining at about 2,500,000 with slight morphological changes of secondary anemia. White cells ranged from 54,000 to 112,000, the differential running from 79 to 89 per cent lymphocytes. The lymphocytes were mainly of the large type. Polymorphonuclears and transitionals were larger than normal. A few normoblasts were found.

Blood platelets were almost entirely absent, those present being very much larger than the normal and only 1,700 per cubic millimeter. Bleeding time was from 7 to 9 minutes. Clotting time was obtained by Wright's method of testing the blood obtained by venepuncture and found to be within normal limits. Prothrombin time was also determined and likewise found to be within normal limits. The continued hemorrhage was due to the absence of platelets which, according to Duke, function in the stopping of hemorrhage by the formation of thrombi at the points of injury to the blood vessels. The prolonged bleeding time is thus due to the absence of platelets.

The case is typical of purpura hemorrhagica, which is always characterized by a very low or absent platelet count, prolonged bleeding time and normal clotting time of blood obtained by venepuncture. It also illustrates the importance of these special tests in the blood examination of all cases of bleeders.

DISCUSSION

DR. ROBINSON: I think this piece of work is very well worth reporting. The characteristics of the platelets that Mr. Heuston has found in illustrating, are very unusual and he has offered an explanation for them. Of course, it is an hypothetical explanation and may or may not be correct. As he said in closing, the study of platelets may be of very great importance in certain types of blood disorders which this case illustrates.

A NOTE ON THE MECHANISM OF HEART MUSCLE CONTRACTION.*—By DR. MONTROSE T. BURROWS, M.D. (Department of Pathology, Washington University Medical School.)

In this paper two facts were emphasized; the fact is that tissue cells within a tissue culture cannot subsist on food material found within a medium of blood plasma. They grow also in a medium of salt solution. The cells that grow in a tissue culture are those at the periphery of the fragment. They obtain their nutriment from the cells that disintegrate in the center of the tissue fragment. The material use for food diffuses out over the surface of the medium. It is colloidal in nature and insoluble in the medium.

The second fact is that fetal heart muscle cells are essentially fluid in nature. The peculiar mechanical organization essential for growth, migratory movement, rhythmical contraction or other forms of activity are differential surface tension phenomena established and controlled by the organization of the environment. By changing the mechanical organization of the environment one may change a contracting heart muscle cell to one which grows and divides by mitosis and is indistinguishable from a sarcoma cell. The growing and dividing cells are those cells which lay at the interval between the substances diffusing from the fragment over the surface of the medium and the medium itself. The contracting cells are elongated, cylindrical-shaped cells stretched through the liquid medium between a surface similar to that suitable for growth and the ends of tense bands of fibrin. The end of the cell in contact with the tense bands of fibrin is in metabolic equilibrium. Heart muscle cells completely embedded in a mass of fibrin show no metabolic activity in presence of food and oxygen.

* This paper was also read before the American Association of Physiologists, Minneapolis, Minn., Dec. 28, 1917.

They have been kept in this position in the incubator for six months without disintegrating. They grow again when removed to a suitable environment. The other end of the contracting cells is in contact with a surface similar to that on which cells grow. The curve of growth of heart muscle cells has been studied and it has been found to follow the law of mass action and the cells come to an equilibrium before food and oxygen is exhausted. This inactivity or equilibrium is not disturbed by washing with serum but only when colloids (fibrin) or dead cells are added. It is assumed to be due, therefore, to the accumulation of waste product insoluble in serum but soluble in colloidal substances. This product in the presence of the surface food layer decreases the surface tension of the cell. With one end of the cell in equilibrium, the other yielding an invaluable product it is evident that periodically this insoluble product may be broken up and an electric current pass (Bredig's phenomenon). It has been shown that oxygen is absorbed only during the relaxation period, tension is then developed. Lactic acid is liberated at contraction. The author has found that lactic acid causes an increase in surface tension.

Thesau a theory for the mechanism of heart muscle contraction has been developed which explains the energy transformation and the physico-chemical changes known to occur in heart muscle contraction.

The experiments were made with single and completely isolated rhythmically contracting heart muscle cells (Burrows, *München. Med. Wchnschr.*, 1912).

DISCUSSION

DR. ROBINSON: The question of the chemical changes that prevail when the heart muscle contracts and relaxes is one that has interested me considerably recently and one that I touched on in a report before this Society last month. The heart has a very extraordinary function to perform in clearing itself of metabolic products, which, if accumulated, would destroy function; and I believe that we have some evidence to show that the heart, when there is evidence either of disease in the muscle fiber or in circulation through the muscle, fails to clear metabolites properly.

The work that Dr. Burrows has reported gives us a new method of approaching the very interesting subject of muscular contraction and I think that some light may be thrown on the subject of cardiac insufficiency by such study. Fletcher and Hopkins have recently reported work dealing with metabolism during the diastole of cardiac contraction. They bring out the point that oxidation does not take place during the period of activity, but during the period of rest, as Dr. Burrows stated.

2. IMPROVEMENTS IN THE TECHNIC OF RADIUM THERAPY.—By DR. FRED. J. TAUSSIG.

Dr. Taussig stated that the purpose of his paper was primarily to correct the impression that had gone abroad that the limits of radium therapy was pretty well defined at the present time. He pointed out the progress that had been made in the technic of radium applications and the extensive field for further improvement in results. He dwelt, in particular, on the work being done at the present time in the General Memorial Hospital of New York and the Huntingdon Memorial Hospital of Boston. Many new forms of applicators had been devised, among which the most ingenious are the use of dental compound as suggested by Janeway, and the construction of the mercury "bomb" for cervical cancers by Dr. Bailey.

By varying the total dosage, the filtration, the distance of application, the interval between treatments, etc., we can hope, in the coming years, to arrive at a better understanding of the most favorable plan of treatment of each particular kind of cancer. The combination of surgery with radium treatment also offers a large field for further investigation.

In conclusion the writer urged more exact methods in the dosage of cases and a complete statement of all essential data in every report of cases made hereafter. He believes that results thus far justify the conclusions that in an increasingly larger number of instances, radium will be found to be equal if not surpassing surgical treatment of this disease.

DISCUSSION

DR. WILKENING: About three months ago Dr. H. Schwarz introduced on the gynecological service of Barnes Hospital extensive roentgen ray and radium treatment preceding (as a routine) all radical operations for cancer of the uterus in the hope of lessening thereby the chances of metastases.

In the March-April, 1917, number of the *Journal De Radiologie et l'Electrologie*, Nogier advocates this sort of treatment as follows: "Before any intervention on a neoplasm, no matter how limited it may appear, irradiate intensively with filtered rays; irradiate the tumor at first and then the neighboring regions, especially the lymphatics which are generally involved; then operate early, removing all that is macroscopically visible."

Nogier accepts the explanation of Bumm that it is possible the cancer cells may be severely damaged by such radiation, while a histological examination may not make this damage visible.

Nogier further states: "This is in accordance with the curious results of Wassermann and Ehrlich who showed that the roentgen rays as well as the gamma rays of radium seem to act directly on the cancer cell without killing it, by acting on the cellular functions which govern the multiplication of the elements themselves (genoceptor), whereas the other element of the living cell which governs the vital function of nutrition (nutricepter) does not seem to be affected by the radiations."

DR. GELLHORN: I will not speak on the subject of technic because I am only now going to apply the technic described by Dr. Taussig, but I can say something about the results of radium treatment. I was very skeptical for quite a while on account of the extravagant claims and contradictory statements found in literature, but last year at the Pittsburgh meeting of the American Gynecological Society, I heard men speak whose sane and safe attitude toward therapeutic results was well known to me personally. And now I have had the opportunity to examine most of the uterine cancer cases treated by Dr. Taussig. I must confess that I was profoundly impressed by the palliative results that have been accomplished in these cases—and I may add that thus far we can only speak of palliative results. Large cauliflower growths of the cervix melted away in a few weeks while cancerous craters shrunk to the size of fistulous tracts; in fact anybody who has examined advanced cases of cancer must acknowledge the magnitude of the changes which have taken place in these cases of Dr. Taussig's. As a result findings were produced quite unlike anything we have been familiar with and the examining finger of the gynecologist meets with structural changes in the vagina which are hard to classify with any condition we have known heretofore.

Whenever I have spoken of my acetone treatment I have always said that I would be the first to give it up for a better method. There is still a field for the acetone treatment in communities where radium is not available, but in cities and modern hospitals there can be no doubt in my mind but that the palliative treatment of uterine cancer should rest on radium.

DR. HENRY SCHWARZ: I am glad that Dr. Taussig has brought up for discussion the very timely and very important question of radium treatment. Dr. Taussig has considered in his paper the various methods of applying radium treatment to all the different parts of the body in which such treatment may be indicated; he has very correctly emphasized the neces-

sity of using exact methods in employing so powerful an agent, to insure correct dosage and to guard against undesirable by-effects; he has also dwelt on the method of employing radium emanation which for certain conditions and localities has advantages over the application of radium salts.

In gynecological conditions radium treatment has gained its earliest and most satisfying results, namely, the cure of certain cases of fibroids; the cure of many cases of climacteric hemorrhage and the cure or the amelioration of uterine cancer.

The gynecological service of Barnes Hospital is equipped, since July, 1917, with a sufficient amount of radium for all gynecological purposes. This radium consists of 150 mm. of radium-barium-sulphate, representing 101 mm. of radium element; it is contained in two capsules of approximately 25 mm. each and one capsule of approximately 50 mm.

These three capsules enable us to use amounts of 25, 50, 75, or 100 mm. for treatment; of course, we use brass screens and pure rubber tubing to protect the patients against radium burns.

Our own experience is too recent and too limited for present publication; it seems to confirm in a general way the results obtained by other American gynecologists, Clark in Philadelphia, Miller in New Orleans and others.

It is no longer necessary or desirable to employ large quantities of radium in the treatment of gynecological conditions; with 50 mm. (about \$5,000 worth) a fair start can be made.

DR. SACHS: I do not want to discuss radium treatment, but I do want to emphasize one point that Dr. Taussig has mentioned, which I think is a dangerous thing. Up to the present time we do feel positively that there are certain cases of cancer which are in the operable stage. To subject those cases to a method of treatment as yet unproven is I think a very dangerous and unjustifiable procedure. In the next place, I also want to say that most surgeons only speak of an operable recovery. I do not think in the last five or ten years any reliable surgeon would think of saying he had cured a case.

DR. TAUSSIG: I think it is very interesting to note the difference in points of view in the treatment of cancer by surgical methods and treatment by radium. When a surgeon operates on a cancer case, it is tentatively cured until some positive evidence of recurrence is seen, but when a patient is treated with radium, the scrapings from the surface may bring away no cancerous material, and yet the case is not considered cured unless seven, eight or nine years have elapsed. So we have gone to the other extreme in our attitude toward radium.

I think we can fairly say that radium has cured cancer of the uterus. There are a considerable number of cases reported by Kelly who have gone for eight or nine years, and a number of cases reported in Paris; also in London and Germany, so that there is no doubt but that radium does cure cancer.

Ewing says that the only way we can compare radium and surgery is to take the same kind of cases and treat one with surgical measures and one by radium treatment. I happened to see radium applied in two cases in New York of early operable cancer of the cervix. One I saw last May and had occasion to reexamine in November. In May she had a growth the size of a thumb-nail. It was a tumor that a gynecologist would certainly have felt offered very good prospect of permanent cure by surgical measures. For some special reason surgical measures were advised against and radium employed. When I examined the woman in November she had a normal looking cervix. It is a question whether her chances of permanent cure are not going to be as great as if a hysterectomy had been done. Of course, I do not advise that plan except in a very tentative way but it is the only fair basis for comparing results with surgical measures.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the assembly room in the Public Library Building, Wednesday evening, March 6, the president, Dr. Daniel Morton, in the chair. Eighteen members were present. The minutes of the previous meeting were read and approved, also the minutes of the meeting held February 6.

The applications of Dr. William Franklin Carroll and Dr. Franklin G. Weary for membership in this society received their second reading, and having been endorsed by the board of censors, were balloted on and they were duly elected to membership.

The program committee, through their chairman, announced that their next meeting would consist of a dinner and three scientific papers, to be held at Savannah, Andrew County, Mo., the dinner to be served at 6 o'clock.

On motion of Dr. Caryl Potter, seconded by Dr. Spencer, the following resolution was voted on and carried:

Resolved, That the program committee be given \$300 with which to purchase a combination projectoscope and moving picture machine and a one-year membership in the Film Company, entitling this society to 15,000 feet of films to be used in one year. The above sum of \$300 to be placed at their disposal provided that one half of the amount be raised by private subscriptions from members of this society. Announcement was made by the president that the welfare board had granted permission to hold clinics at the Noyes Hospital in connection with the Buchanan County Medical Society.

Dr. Delameter requested the cooperation of this Society to secure larger facilities for the use of the board of health in taking care of infectious diseases, and the president reappointed the old committee, consisting of Drs. Woodson, Gray and Ladd to conduct the investigations and make such recommendations as they saw fit.

A very interesting clinical case of tendon transplantation following infantile paralysis was presented by Dr. Caryl Potter.

The following resolution, introduced by Dr. Leonard, seconded by Dr. Ladd, was adopted and the secretary was instructed to supply a copy to each of our daily newspapers:

Resolved, That the Buchanan County Medical Society regrets to learn that the welfare board has abandoned the principle of trained social workers, and believes that the position of secretary of the board should be filled by a man who is specially trained in social work. We urge that social service is incompatible with political domination. The Buchanan County Medical Society recommends that the welfare board employ trained workers for its executive position.

There being no further business before the Society, the meeting adjourned.

W. F. GOETZE, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society held its second meeting for 1918 at the Major Hotel in Liberty, February 25. A good attendance as usual, with Dr. C. C. Conover of Kansas City, and Dr. W. A. Miller of Eagletown, Okla., visiting.

By special invitation Dr. Conover addressed the Society on "The Therapeutics of Intestinal Infection." The doctor prefaced his remarks by several stereopticon views showing histological and pathological conditions of the intestines. His discussion of treatment was thorough and impressive. Given a patient with chronic intestinal infection, the first requisite to

successful results is time—six weeks absolutely imperative, twelve weeks better. The patient should be put to bed and an intelligent nurse employed. It is unfortunate that few patients are willing or able to undertake the necessary steps to get well.

The doctor condemned aperient waters and strong purgatives. He dwelt much on the importance of stewed fruit diet, colonic lavage and solutions of bicarbonate of soda. I do not recall that he even mentioned the so-called intestinal antiseptic medicines. He advocated electricity, massage, and atropin as excellent adjuncts. He included mucous colitis in his discussion, and put a favorable prognosis to every case where full control is had. A patient may be put to bed for six weeks, properly dieted, and emerge with 10 pounds of weight added.

I am sorry that some of our best men do not find time to come to our meetings. Attendance is absolutely essential to maintaining a good county medical society. I would not care to belong to a lukewarm, mollycoddle, medicated outfit. Come next time, doctor—and don't forget it's time to pay dues, if you care to have our Society on the Roll of Honor.

J. J. GAINES, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1917, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

BARBITAL.—DIETHYL-BARBITURIC ACID, first introduced under the name veronal. In small doses barbital is a relatively safe hypnotic, but fatalities have followed its indiscriminate use. It is claimed to be useful in simple insomnia, as well as in that accompanying hysteria, neurasthenia and mental disturbances. From 0.3 to 1 gm. (5 to 15 grains) in hot water, tea or milk, or, if in wafers or capsules, followed by a cupful of some warm liquid.

BARBITAL-ABBOTT.—A brand of barbital complying with the New and Nonofficial Remedies standards. The Abbott Laboratories, Chicago.

MERCURY BENZOATE-MERCK.—A brand of mercuric benzoate complying with the New and Nonofficial Remedies standards. Mercuric benzoate has the properties of mercuric chloride. It has been said to be useful for hypodermic use and in gonorrhoea. Merck and Company, New York.

CHLORCOSANE.—A liquid obtained by chlorinating solid paraffin. It contains about 50 per cent. of chlorine in stable combination. Chlorcosane is used as a solvent for dichloramine-T; with it solutions containing as much as 8 per cent. may be prepared. When used in a hand atomizer, chlorcosane solutions of dichloramine-T may be made less viscous by the addition of 10 per cent. of carbon tetrachloride. The Abbott Laboratories, Chicago.

BETANAPHTHYL SALICYLATE-CALCO.—A brand of betanaphthyl salicylate complying with the New and Nonofficial Remedies standards. Betanaphthyl salicylate is believed to act as an intestinal antiseptic and, being excreted in the urine, to act in a similar way in the bladder. It is said to be useful in intestinal fermentations, catarrh of the bladder, particularly gonorrhoeal cystitis, rheumatism, etc. The Calco Chemical Co., Bound Brook, N. J.

ACETYSALICYLIC ACID-MERCK.—A brand of acetylsalicylic acid complying with the New and Nonofficial Remedies standards. Acetylsalicylic acid is employed in rheumatic conditions, and especially as an analgesic and antipyretic in colds, neuralgias, etc.

CHLORAZENE SURGICAL POWDER.—An impalpable powder composed of chlorazene, 1 per cent.; zinc stearate, 10 per cent., and sodium stearate, 89 per cent. Chlorazene surgical powder is absorbent, slightly astringent, and forms a closely adherent film when applied to the skin. It may be dusted freely over denuded or abraded areas, cuts, wounds, and skin eruptions. The Abbott Laboratories, Chicago (*Jour. A. M. A.*, Feb. 16, 1918, p. 459).

PROPAGANDA FOR REFORM

PHENALGIN AND AMMONOL.—At the time that synthetic chemical drugs were coming into fame and when every manufacturer who launched a new headache mixture claimed to have achieved another triumph in synthetic chemistry, Ammonol and Phenalgin were born and duly christened with chemical formulas. However, one of the first reports of the Council on Pharmacy and Chemistry showed them to be mixtures composed of acetanilid, sodium bicarbonate and ammonium carbonate. Since then the unwarranted claims made for these preparations have been exposed repeatedly, and the danger of the indiscriminate use of headache mixtures pointed out. Despite the exposure of the methods used in exploiting Ammonol and Phenalgin, one finds just as glaringly false statements made in the advertisements of Phenalgin today as were made in its unsavory past. This would seem to indicate either that physicians have short memories or that they are strangely indifferent to the welfare of their patients, to their own reputation, and to the good name of medicine (*Jour. A. M. A.*, Feb. 2, 1918, p. 337).

ABSORPTION AND EXCRETION OF MERCURY.—It may be regarded as clearly established that, in addition to the kidneys, the stomach may participate in this eliminatory function quite as well as the other portions of the alimentary tract. The occurrence of severe intoxications from the use of mercuric chloride in vaginal douches is likewise recognized. The absorption of mercury through the sound skin has been in dispute. To account for the efficacy of mercurial inunction, the contention has been made that the mercury thus applied is volatilized and absorbed through the lungs in greater part if not entirely. Experiments in the dermatologic laboratories of the Philadelphia Polyclinic leaves little doubt that the skin is an important, perhaps the most important, path of absorption of mercury applied by inunction (*Jour. A. M. A.*, Feb. 9, 1918, p. 392).

BASY BREAD.—This is an asserted obesity cure put out by the Doctors' Essential Food Company, Orange, N. J. The advertising claims are extravagant and typical of other obesity treatment literature. Analyses indicated that in composition Basy Bread was similar to graham bread. Basy Bread sells for \$1 a loaf. Dr. Wiley well sums up the case thus: "There is one way in which Basy Bread will reduce; that is, don't eat any of it nor much of it nor much of any other kind" (*Jour. A. M. A.*, Feb. 9, 1918, p. 407).

CAMPHO-PHENIQUE.—The Secretary of the Harvard University Medical School received, from the Campho-Phenique Company of St. Louis, a letter stating that the concern wishes to supply the senior stu-

dents of all medical colleges with samples of Campho-Phenique and Campho-Phenique powder, and ointment, and asking the number of students and the name of every student in the graduating class. The Campho-Phenique concern believes in following the old advice, "Catching them young." In 1907, the Council on Pharmacy and Chemistry reported that Campho-Phenique (liquid) was exploited under a false "formula," that it was a solution of camphor and phenol in liquid petrolatum, and that for all practical purposes Campho-Phenique Powder was essentially a camphorated talcum powder containing apparently sufficient phenol and camphor to give the powder an odor. The report of the Council further brought out that the Campho-Phenique Company was in effect one of the numerous trade names adopted by one James F. Ballard. Mr. Ballard seems to market a number of "patient medicines," for some of which Dr. Ballard has pleaded guilty in the federal courts to making false and fraudulent claims (*Jour. A. M. A.*, Feb. 9, 1918, p. 408).

SODIUM BICARBONATE.—Few patients will object to the taste of sodium bicarbonate if the required dose is administered dissolved in a convenient quantity of cold water. The taste may be disguised by dissolving the sodium bicarbonate in carbonated water or else by adding a little sugar and lemon juice to ordinary water. Sodium bicarbonate may also be prescribed in the form of tablets. Though it is better that these be allowed to dissolve in the mouth, in most cases they are swallowed without discomfort (*Jour. A. M. A.*, Feb. 9, 1918, p. 410).

ACETYSALICYLIC ACID AND PHENOL SALICYLATE INCOMPATIBLE WITH ALKALIES.—In the presence of moisture, acetylsalicylic acid is decomposed by magnesium oxide (calcined magnesia), as is also phenyl salicylate (salol). Hence these drugs should not be combined with magnesium oxide in a prescription (*Jour. A. M. A.*, Feb. 9, 1918, p. 410).

FELLOWS' SYRUP, AND OTHER PREPARATIONS OF THE HYPOPHOSPHITES.—An advertisement for Fellows' Syrup reads: "Fellows' Syrup differs from other preparations of the hypophosphites. Leading clinicians in all parts of the world have long recognized this important fact. Have you? To insure results, prescribe the genuine R Svr. Hypophos. Comp. Fellows'. Reject cheap and inefficient substitutes. Reject preparations 'just as good.'" In truth, Fellows' Syrup is not like the better preparations of this type, since after standing it contains a muddy looking deposit that any pharmaceutical tyro would be ashamed of. Examination of the literature used in the exploitation of Fellows' Syrup fails to disclose any evidence to show that it has therapeutic value. Not only is there an entire absence of any evidence of its therapeutic value, but there is an abundance of evidence that the hypophosphites are devoid of any such therapeutic effects as they were formerly reputed to have, and that they are, so far as any effect based on their phosphorus content is concerned, singularly inert. As the result of its investigation of the therapeutic effects of the hypophosphites, the Council on Pharmacy and Chemistry concluded: There is no reliable evidence that they exert a physiologic effect; it has not been demonstrated that they influence any pathologic process; they are not "foods." If they are of any use, that use has never been discovered (*Jour. A. M. A.*, Feb. 16, 1918, p. 478).

CALCIUM IODIDE IN TUBERCULOSIS.—There appears to be no work to indicate that the intravenous administration of calcium iodide in tuberculosis is of value. It has not been demonstrated that tuberculosis is associated with a deficiency of calcium. On the other hand, experiments demonstrate that the administration of calcium does not change the calcium content of the blood. Furthermore, there is no evidence to warrant the intravenous administration of iodides (*Jour. A. M. A.*, Feb. 16, 1918, p. 481).

BELL-ANS (PAPAYANS, BELL).—"Are you going to sit there and let the other folks eat up all the good things just because you are afraid to pitch in, when 2 or 3 Bell-Ans taken before and after the meal would enable you to enjoy your share of all that's coming without a bit of discomfort or distress? Bell-Ans has restored the pleasures of the table to thousands who say: 'I can now eat anything and plenty of it, too.'" The *New York Tribune* comments that such advertisement as this is not limited to the evil effects to the misguided individual who eats lobster and ice cream at midnight and trusts to Bell-Ans to atone for his indiscretion. The most serious effect of such reckless advice is the example which the advertising sets to other advertisers (*Jour. A. M. A.*, Feb. 23, 1918, p. 557).

ANTIPHLOGISTINE.—A. G. Gould, M.D., plant physician to the Goodyear Tire and Rubber Company, writes that after corresponding with the physicians in charge, he finds incorrect the claims of the Denver Chemical Manufacturing Company, regarding the use of Antiphlogistine by certain establishments. He asks: Is there not some way that such exploitation of our large companies can be prevented? (*Jour. A. M. A.*, Feb. 23, 1918, p. 557).

SYPHILODOL.—According to the French Medicinal Company, Inc., which markets the product, Syphilodol "is a synthetic chemical product of silver, arsenic and antimony . . ." Nowhere in the advertising matter is there a more comprehensive statement regarding the composition of this "new synthetic" than that just quoted. The produce is being examined in the A. M. A. Chemical Laboratory; the examination having advanced sufficiently to show that Syphilodol contains considerable quantities of mercury. Although the advertising leaflet claims that the preparation is "the formula of the late Dr. Alfred Fournier of Paris" and has been exhaustively tested by Metchnikoff, a careful search of French medical journals fails to show any report on Syphilodol (*Jour. A. M. A.*, Feb. 23, 1918, p. 559).

TROUSSEAU'S WINE.—This obsolete combination of drugs acting on the heart and kidneys is made by maceration of digitalis, squill and juniper berries in wine and alcohol, and adding potassium acetate to the expressed liquid (*Jour. A. M. A.*, Feb. 23, 1918, p. 559).

PYXOL.—This is a proprietary preparation somewhat similar to the compound solution of cresol of the U. S. Pharmacopeia. In 1915 Pyxol was declared misbranded under the Insecticide Act (*Jour. A. M. A.*, Feb. 23, 1918, p. 559).

LUMINAL.—Chemically, Luminal is phenyl-ethylbarbituric acid, and differs from veronal only in that one ethyl group is replaced by a phenyl group. Luminal is claimed to be a useful hypnotic in nervous insomnia and conditions of excitement of the nervous system (*Jour. A. M. A.*, Feb. 23, 1918, p. 559).

BOOK REVIEWS

MATERIA MEDICA, PHARMACOLOGY, THERAPEUTICS AND PRESCRIPTION WRITING. For Students and Practitioners. By Walter A. Bastedo, PhG., M.D., Assistant Professor of Clinical Medicine, Columbia University. Second edition, reset. Octavo of 654 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$4.00 net.

This edition of Dr. Bastedo's work has been brought carefully up to date and a few new chapters have been added; notably on benzine, benzol, kaolin, ethylhydrocuprein, phenylcinchoninic acid, oil of chenopodium, and the Carrel-Dakin treatment.

The book is a valuable reference work for any physician's library and there is but little to criticize. A rather curious statement occurs on page 124 under sulphur. "For the blood, in acne, it (sulphur) is given in the form of calcium sulphid." We really do not believe that the author agrees with the laity in thinking that acne is a "blood disease" or that "sulphur is good for the blood."

R. S. W.

MEDICAL WAR MANUAL NO. 2. NOTES FOR ARMY MEDICAL OFFICERS. By Col. T. H. Goodwin, R.A. M.C., with an introductory note by Surgeon-General William C. Gorgas, U. S. Army. Illustrated. Lea & Febiger, Philadelphia and New York, 1917. Price, \$1.00.

This is an excellent manual for army medical officers. Colonel Goodwin was the representative of the British Army Medical Service in the Surgeon-General's Office at Washington for several months and delivered many addresses and lectures both to the profession and to the laity on medical work of the British army.

HISTORY OF MEDICINE, SUGGESTIONS FOR STUDY AND BIBLIOGRAPHIC DATA. By Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon-General's Office, Washington, D. C. Second edition, revised and enlarged. Octavo of 905 pages with many portraits. W. B. Saunders Company, Philadelphia and London, 1917. Cloth, \$6.50 net; Half Morocco, \$8.00 net.

In this new edition Dr. Garrison has made many additions using much of recent research as well as some older work which he has recently had the opportunity to study.

To the medical student and the practitioner, both of whom may profit from the study of the history of their science, we recommend this book. It will serve as an introduction if they have not already been introduced and if they have, they can find in it much of interest and value.

A complete bibliography and "Medical Chronology" add much to the value of the volume as a reference work.

R. S. W.

THE IMMEDIATE CARE OF THE INJURED. By Albert S. Morrow, A.B., M.D., Clinical Professor of Surgery in the New York Polyclinic. Second edition, thoroughly revised. Octavo of 356 pages with 242 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$2.75 net.

The task of presenting clearly and completely the subject of first aid to those who have no medical knowledge is very successfully undertaken in this volume. The section dealing with anatomy and physiology is sure to be valuable by reason of the many

excellent illustrations accompanying the text descriptive of gross and minute anatomy.

Very good judgment is used in the section dealing with the choice and application of surgical dressings, those described being selected with due regard for their ease of application. In this section the illustrations are also numerous and very well chosen.

The subject of the control of hemorrhage could not be better presented to the first aider.

Transportation of the injured is very fully considered; fractures and dislocations, and the treatment of poisoning are treated in considerable detail, which should make this an excellent book of reference for nurses. Altogether, to the first aider who is willing to give some time to the study of this subject, the book should prove invaluable.

F. R. R.

THE BREAST: ITS ANOMALIES, ITS DISEASES AND THEIR TREATMENT. By John B. Deaver, M.D., LL.D., Professor of the Practice of Surgery, University of Pennsylvania, and Joseph McFarland, M.D., Sc.D., Professor of Pathology and Bacteriology in the Medical Department of the University of Pennsylvania; assisted by J. Leon Herman, B.S., M.D., Assistant Surgeon to the Methodist Hospital of Philadelphia. With 8 colored plates and 277 illustrations in text. Philadelphia: P. Blakiston's Sons and Company, 1917. Price, Cloth, \$9.00 net.

This textbook, written in collaboration by masters of clinical surgery, pathology and anatomy, is encyclopedic in extent. It embraces practically the entire scope of our knowledge of the diseases and anomalies of the breast and surpasses any work on these subjects with which we are familiar. Each topic discussed is followed by a full and complete bibliography.

The chapter on the Anomalies of the Breast contains an unusual amount of curious information which can scarcely be found elsewhere.

In the chapter on Infectious Diseases of the Breast is a discussion of tuberculosis of the breast that is of special importance. A table is included which details all the cases of tuberculosis of the breast recorded up to the present time, in all forty-eight primary and twenty-nine secondary cases.

A very full discussion is given to the subject of cysts of the breast. The relation of cystic degeneration of the breast to carcinoma has been a moot question among surgeons for several years. The authors, after a study of the subject conclude that in the present state of knowledge the question cannot be answered; we cannot be certain of the relation of one morbid process to the other. The case is not proven. But the matter is of the utmost importance in its surgical application, for it is on the theory that abnormal involution is the precancerous stage of cancer that many surgeons are now advising and treating their patients.

The subject of cancer of the breast is handled with characteristic thoroughness. The various methods of technic devised by different surgeons are fully illustrated and given in detail. The technic developed by Dr. Deaver at the German Hospital evidently was influenced by the teachings of Handley, that the extension of the disease takes place along the deep facial planes.

This work unquestionably is one of the most important contributions to the entire literature of the diseases of the breast and will remain for years to come a full and complete presentation of our present knowledge of breast diseases.

H. S. M.

MILITARY ORTHOPEDIC SURGERY. MEDICAL WAR MANUAL No. 4. Authorized by the Secretary of War and under the supervision of the Surgeon-General and the Council of National Defense. Prepared by the Orthopedic Council: Major Elliott G. Brackett, M.R.C., Director of Department of Military Orthopedic Surgery to the Surgeon-General; Major Joel E. Goldthwait, M.R.C., Director of Military Orthopedic Surgery for the Expeditionary Forces; Major David Silver, M.R.C., Assistant Director of Military Orthopedic Surgery to the Surgeon-General. Illustrated. Lea & Febiger, Philadelphia and New York, 1918. Price, \$1.50.

The World War and Sir Robert Jones have put orthopedic surgery in a prominent place on the medical map.

The first orthopedic hospital of the war was established by Sir Robert Jones at Shepherds Bush in London. Of the first thirteen hundred men who entered this hospital, the back wash of serious lesions and bad surgery, one thousand returned to army service. That made the authorities sit up and take notice. Now there are nearly nine thousand beds in England. Different groups of men specialize on different things as diverse as stiff fingers, internal derangement of knees, nervous injury with paralysis, and malunion of fractures. Besides surgery, they have ample provision for massage, electrical treatment, and contrast baths, and large workshops where the injured men perform some useful labor especially designed to help overcome their particular disability.

The orthopedists have done much in suggestions to their brethren at the front in the prevention of deformities and have devised simple, convenient and efficient apparatus for splinting wounded limbs. Many American orthopedists are helping in this work in England. Now they are beginning to be sent forward to France, where the American Government is preparing thirty-five thousand beds for this department of surgery. The Surgeon-General has decided that a large number of these cases might as well come to the orthopedic hospital at once instead of being detained in the general hospital.

This book is the official manual of the American Orthopedic Council. It cannot be properly abstracted; it is packed with useful information already condensed by the editor, expressed in a simple, forceful style, printed on thin paper, in a vest-pocket sized volume. It is a work of great value to physicians and surgeons in civil practice. It is full of tips on diagnosis, correct principles of treatment, and simple, efficient means to that end. The book contains many abstracts, or quotations, from the volume of Oxford War Primers, edited by Sir Robert Jones, from the classic work of Colonel Munson, U. S. Army, on the soldier's foot and shoe, and many illustrations printed in the supplement taken from the Splint Book by United States medical officers in France, which is just off the press.

The first thirty-four pages are devoted to the foot; what is normal, method of examination, what disqualifies, descriptions of the soldier's shoe, how to measure for them, and how they should be broken in. Subsequent disabilities and their treatment are then discussed.

Next come a section on general principles in injuries of joints and their treatment. Such difficult questions as when to use passive motion, and just how much to use, are discussed fully.

The book abounds in axioms such as this: "Pain on movement in every direction suggests a lesion in the joint or in parts intimately connected with it"; while, "Freedom of movement in one or more directions, but not in all, suggests a lesion of some groups of structures outside the joint proper."

Emphasis is laid on the late appearance of pain and disability due to contusion of joint cartilage on

account of the histologic similarity between cartilage and the cornea, where repair cannot take place until blood vessels are grown in from the edges and vascularize the structure.

Another section calls attention to pain in the cicatrix, due to masses of scar tissue which make irregular pressure and interfere with the local blood supply. It is proposed that to test whether this is the cause of the pain in deeply seated cicatrices about joints, all that is necessary is to promote a rapid flow of blood to the surface by brisk slapping and massaging of the skin; as soon as a rosy flush appears on the skin, ask the patient to move the joint. If he can do so with less pain and stiffness than before, it will be obvious that the slight alteration and blood pressure has made all the difference.

An illustration of the practical nature of the book may be afforded by the treatment suggested for a fracture of the condyles of the humerus with moderate injury to the joint and extensive loss of the soft parts over the front of the elbow. The arm is first treated in the acutely flexed position in order to take care of the fracture. As soon as a callus is formed enough to stand slight pressure, the arm is put once through its complete range of passive movement in order to stretch the adhesions within the joint before they have become firm. This motion is not repeated in order not to provoke additional exudates. The arm is gradually extended until the final healing of the soft parts takes place with the arm in a fully extended position in order to prevent disability from the contracture of the scar and the bend of the elbow. At occasional intervals during this time the arm is gently put once through its entire range of passive movements in order to further stretch adhesions within the joint.

There is a classic chapter on disabilities of the knee, just as useful in civil as in military practice.

The chapter on position of election for a joint when bony ankylosis is inevitable contains three points of special importance. First, that in shoulder cases the arm should be abducted to about 50 degrees, with the elbow slightly in front of the coronal line of the body. The scapula should be in its normal position. This gives the largest number of useful movements after the ankylosis is accomplished and the accessory joints must furnish the motion. Second, all injuries of the wrist joint should be treated with the wrist dorsiflexed. This is a priceless surgical axiom, the neglect of which is grave. The common deformity of palmar flexion occurs when no splint is applied, or from the use of a straight splint. In all cases in which the arm and fingers are kept in such a splint palmar flexion of the wrist occurs, and this condition is a lifelong handicap to the usefulness of the hand. Third, the foot should be kept at a right angle with the leg so that the sole impinges on the ground in a slight varus rather than a valgus position.

In the chapter on nerve suture, it is especially urged that all skin cicatrices and ankylosis which would interfere with the action of the muscles paralyzed and which are hoped to be restored, must be overcome and then the muscles must be put in a position where they are not overstretched, in accordance with the principles urged in the treatment of paralysis after poliomyelitis; otherwise, the most successful suture of a nerve will fail because the muscle is unable to respond to the first feeble impulses which it receives, and send back the afferent muscle sense stimulus necessary to complete the establishment of nerve control.

There are many interesting pages on tendon transplantation and a very complete abstract on the subject of bone grafting, or inlay, according to the method of Albee

The remainder of this book is made up of accounts of splints and apparatus which it is useless to attempt to describe without illustrations, but which abundantly repay attention of the reader. R. McE. S.

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ORIGINAL ARTICLES

A CONTRIBUTION TO THE ETIOLOGY OF ALOPECIA AREATA NEUROTICA*

JOSEPH GRINDON, M.D.
ST. LOUIS

The term alopecia areata denotes a symptom group of which some cases are clearly neurotrophic, some parasitic, and others probably toxic. To the last class presumably belong many of the universal cases, often associated with nail-changes, which must be referred to an equally universal cause, although even some of these are apparently of nervous origin.

I will not attempt an analysis of all these conditions, chiefly for the reason that I have never, so far as I know, met with a case of the parasitic type, and but few of the probably toxic sort. I shall here deal only with the common type, affecting the scalp or beard, and less often the eye-brows and lashes, as I have observed it in this part of the country.

Since the question of etiology is closely related to that of diagnosis, and in order to exclude the causative factors of conditions presenting surface phenomena more or less similar to those of alopecia areata, I may briefly premise that lupus erythematosus and folliculitis decalvans present central cicatricial atrophy and some evidences of inflammatory activity. The same may be said of favus. In ring-worm the baldness within the affected patch is generally incomplete, with stumps of broken and jagged hairs. Only in so-called "bald" ring-worm can the differential diagnosis remain in doubt, but even here the smooth, bald appearance is not present from the first as in alopecia areata. Besides, ring-worm of the scalp persisting after fourteen years or at most sixteen is all but unknown, whereas alopecia areata is often seen among adults. I may say in passing that my experience as to age-incidence does not wholly agree with that of most writers who place the

great majority of cases between the ages of 10 and 25 or 30, whereas most of my patients have been adults. Syphilitic alopecia is usually of the widely distributed "moth-eaten" type, and I believe occupies the sites of a faded papular eruption. Late luetic alopecia is attended with scarring.

Excluding then the above types of circumscribed baldness and their well known etiological factors, there remain the clear-cut cases of alopecia areata. Everyone today agrees that certain cases are neurotic while others may be parasitic or toxic. Of the last, some are doubtless endocrinic, such as the cases complicating hyperthyroidism, of which I once observed a well marked example. The existence of nervous causes of a widely acting sort, such as "fright, nervous shock, great anxiety, worry, accidents," etc. (Stelwagon); "fright, lightning stroke, great and prolonged anxiety, grief" (Ormsby), is generally recognized. These cases are often distributed over widely separated areas, and symmetrical, or even universal. Clinically they often resemble cases regarded as toxic.

At the other extreme of nervous causation lie those cases dependent upon local nerve impairment, as when the patch is near the site of an injury. Between these extremes are the reflex trophic cases, of which I wish here particularly to speak.

The frequent nervous origin of the condition is emphasized by its coexistence at times with other dermatoses everywhere recognized as nervous. Among the latter are herpes, both zoster and, as in Case 8 later cited, the simple or relapsing form, and vitiligo. The last named disease sometimes occupies the same site as the alopecia, as in a case of Eddowes'¹ and one of mine.² The fact that symmetry is a rare phenomenon in scalp and beard cases might speak either for parasitism or for a local nervous factor, direct or reflex, but argues against a toxic or a general nervous origin.

* Read before the St. Louis Medical Society, March 9, 1918.

1. Brit. Jour. Derm., 1898, p. 465.

2. Dis. of Skin, Grindon, Figure, p. 354.

The origin of the reflex cases affecting the scalp or face has been attributed to disorders of the eyes, nasal cavities, or teeth. While admitting that all these may exist I am persuaded that the last far outranks the other two in importance. It was Jacquet, in an article entitled *La pelade d'origine dentaire*,³ who first laid especial stress upon dental irritation, his position being supported by Jones, Jourdenet, Rousseau and Decelle, Trémollières, and Sequeira Even Sabouraud, a doughty champion of parasitism who continues to hold to his micro-bacillus of seborrhea as the cause of most cases of alopecia, areata or other, admits the correctness of Jacquet's contention in a certain proportion of cases. American authors for the most part give at best but qualified adherence to this view, holding that but few cases can be thus explained. Stelwagon,⁴ indeed, speaking of contagion, says "this cause probably accounts for the majority of cases." I must say that my observation leads me to a diametrically opposite conclusion.

Dental irritation may arise from caries, pyorrhea, apical abscesses in devitalized teeth, impactions, and other abnormal states. Much of the crown and bridge work, of which American dentistry is so justly proud, conceals sources of irritation. Any of these may doubtless occasion an alopecia areata. I cannot, however, regard it as anything less than remarkable that my findings so often showed a certain condition to which I now desire to direct attention.

Many years ago, during my student days, a well known dentist of this city, Dr. H. S. Chase, long since deceased, called my attention to the matter of irritation arising from the presence of gold and amalgam fillings in the same mouth. Given two dissimilar metals immersed in an acid fluid such as the mouth contents usually are, and we have a galvanic battery. The current there generated although weak is constantly acting and may well serve as a stimulus to nerve endings. That it does so I am convinced; and that it may be the source of neuralgias, ear disease, recurrent facial herpes, of which I have encountered several examples, perhaps some localized eczemas, and alopecia areata.

It may here be objected that while the alleged cause usually remains, all but a few cases of alopecia areata spontaneously recover in from a few months to about two years. This is probably due to the nerve ultimately becoming inured to the slight continuous irritation and learning successfully to withstand it. A filling, crown, or bridge will sometimes at first occasion some discomfort, which after a while of itself disappears.

I have recorded below the dental findings in all cases of alopecia areata occurring in my private practice during the years 1916 and 1917. Prior to this I had kept no record of dental conditions in these cases. In all there were found amalgam fillings, and in all but two amalgam and gold. Open carious cavities were present a few times. In no case was there evidence of other sources of reflex irritation, at least of an obvious sort. That amalgam alone may be a source of irritation is explained by the fact that the metals entering into its composition are imperfectly if at all in chemical combination and present chiefly a mechanical mixture from which minute globules of mercury can be expressed by sufficient pressure, thus affording ready opportunity for chemical interchange with the fluids of the mouth.

CASE 1.—Male, aged 49, general health good. One dime-sized and one smaller patch in right submaxillary region; have existed three months.

Upper right bicusp. Icrowned
 All gold work older than five years.
 Upper right molar Iamalg.
 Done five years ago.
 Upper left lat. incis.gold
 Upper left molars I, II, III.....missing
 Lower right molar Imissing
 Lower right molar IIgold
 Lower left bicusp. IIgold
 Lower left molar Imissing
 Lower left molar IIgold

CASE 2.—Male, aged 42, physician, general health excellent. Wassermann, Tb test, heart, etc., negative. never had neuralgia, headaches or herpes. Some premature alopecia of scalp dating from eighteenth year. Never had alopecia areata of scalp. Beard growth profuse. Patch 1½ cm. in diameter right inframaxillary region. Several smaller patches near. A few white hairs near by.

Duration, six months.

Upper right cent. incis.gold
 Upper right lat. incis.amalg.
 Upper right molar Imissing
 Upper right molar IIgold
 Upper right molar IIIamalg.
 Upper left cent. incis.gold
 Upper left lat. incis.missing
 Upper left bicusp. I, molar I.....gold
 Upper left molar IIImissing
 Lower right bicusp. Igold
 Lower right bicusp. II, molar I, II. amalg.
 Lower right molar IIImissing
 Lower left caninemissing
 Lower left bicusp. I, II.....amalg.
 Lower left molar Icrowned
 Lower left molar IIamalg.
 Lower left molar IIImissing

CASE 3.—Male, aged 46. Patch 3 cm. in diameter below left corner of mouth; smaller patch below chin to right. Patch 2 cm. in diameter left side scalp near nucha.

Teeth remarkably strong and sound, except upper left molar I, amalg.; upper left molar II, gold.

CASE 4.—Male, aged 32. No neuralgia or headache. Operated on for appendicitis three years ago. Much mental worry since. Last summer worked eighteen to nineteen hours a day. Patch right side of chin appeared four months ago; left side of chin and to

3. Annales de Derm. et de Syph., 1902, p. 362.

4. Dis. of Skin, 8th Ed., p. 1049.

right of occiput, three months ago; glabella, ten days ago.

All teeth except incisors, upper and lower, lower left canine and lower left second bicuspid, are gold crowned or filled. Tooth last named, amalgam filled.

CASE 5.—Male, divinity student. Four patches on chin and submaxillary with circumscribed, painful areas of scalp appearing two months after insertion of small amalgam fillings in right and left upper and left lower second molars.

The remainder are scalp cases.

CASE 6.—Female, married. Frequent neuralgic headaches. Two patches about size of 25 cent piece near together, one at middle line and another a little to the right. Have existed three months. Some return of easily loosened short hairs.

Upper right cent. incis.cement
 Upper right molar Iamalg.
 Upper left cent. incis.cement
 Upper left molar Iamalg.
 Lower left molars I, IIamalg.

CASE 7.—Female, aged 26. Patch 2 cm. in diameter 3 cm. to left of upper angle occipital bone. Reddened and hyperesthetic. Scalp as whole itches. Some exclamation hairs. Noticed patch three days ago.

Upper left bicusp. IIgold, at 24 years
 Upper left molar IIIamalg., at 24 years
 Lower right molar Igold, at 18 years
 Lower right molar II ...crown, at 18 years

CASE 8.—Male, aged 25. Labial herpes recurring about once a month for several years, limited to single patch a little to right of median line, upper lip. A few days since, outbreak of eight patches all around mouth, on vermilion border and tip of tongue. Small patch alopecia above and behind left ear.

Upper right molar I, IIamalg. 1909
 Upper left bicusp. IIamalg. 1909
 Upper left molar Igold 1912
 Lower left molar Igold 1912
 Lower left molar IIamalg. 1909
 Lower left molar IIIgold 1912

CASE 9.—Female, single, aged 32. Began having bald patches in scalp at about age of 11. Hair would grow out after some months but new bald patches would appear. Was treated and at 12 hair was cut closely all over scalp. After that there was some improvement but patches increasing in size to that of 5 cent piece still frequently recurred. Thinks there was a brief period of freedom. Often had toothache during childhood. At 28 years, noticed larger patch to right near forehead. It grew fast and soon many other patches appeared so that at the end of four months she was completely bald. Also lost eyebrows, lashes, axillary and pubic hair completely. Nails and skin remained unaffected. At 30 an appendectomy and shortening of round ligament. Health has been far better since. Soon after the operation hair began to grow out over the occiput and in front a little to the right. No new hair nor new loss since. Measles and scarlet fever in childhood; at 12, what is described as "boils and an ulcer" which continued for a year and itched severely.

Upper right cent. and lat. incis.
 caninegold, at 24
 Upper right bicusp. Imissing
 Upper right bicusp. II, molars I,
 IIcrowned, at 24
 Upper right molar IIImissing
 Upper left cent. and lat. incis...gold, at 27

Upper left bicusp. I, and molar
 Iamalg., at 18
 Upper left molar II, III.....missing
 Lower right bicusp. IIamalg., at 18
 Lower right molars I, II, III...crowned
 Lower left molar Imissing
 Lower left molar II, III.....amalg., at 18

CASE 10.—Female, age circa 25. A little to left of occipital protuberance a patch, size of 50 cent piece, appeared three weeks ago. Has been treated for months for a sphenoiditis with severe pain in head and neck.

All molars, upper right and left, crowned.
 Upper left bicusp. II, amalgam.

CASE 11.—Female, married, aged 35. Severe dry seborrheic eczema of scalp. Patch of alopecia, not as sharply defined as usual, about 4 cm. in diameter, in front of right parietal eminence, some inflammatory appearance. Appeared one week ago. Severe neuralgic pain involving front half of head for one year on both sides.

Upper right lat. incis.gold, 4 years ago
 Upper left lat. incis.gold, 4 years ago
 Lower left canine and
 bicusp. IIgold 4 years ago
 All molars, upper and lower, amalg., many years ago.

CASE 12.—Female, aged 42; small, thin and nervous. Occasional migraine with scotomata. A large patch, front portion of scalp, on each side of median line. Three small ones above and behind left ear; two small ones in left occipital region.

Upper right cent and lat.
 incis.gold
 Upper right bicusp. I....crown
 Upper right bicusp. II....gold
 Upper right molars I, II...crown
 Upper right molar III....missing
 Upper left cent. and lat.
 incis., caninegold
 Upper left bicusp. I....gold and amalg.
 Upper left bicusp. II....missing
 Upper left molar I.....amalg.
 Upper left molar II....amalg. and caries
 Upper left molar III....missing
 Lower right caninemissing
 Lower right bicusp. I....amalg.
 Lower right bicusp. II...caries
 Lower right molar I....amalg.
 Lower right molar II....crown
 Lower right molar III...missing
 Lower left canine, bicusp.
 I, IIcrown
 Lower left molar I.....amalg.
 Lower left molar II....crown
 Lower left molar III....missing

In conclusion, let me repeat that I am well aware that all cases of alopecia aerata are not neuropathic, nor do I believe that all neuropathic cases are traceable to dental irritation, although it would seem as though the majority of this class of cases can be thus accounted for. I admit that many sorts of dental irritants may come into play, but I contend that the presence of amalgam fillings and, still more, of amalgam and gold in the same mouth in so large a proportion of cases points to something more than mere coincidence.

3894 Washington Boulevard.

RECRUITING FOR THE NAVY*

E. A. BROOKES

Lieut. Commander, U. S. Navy

ST. LOUIS

St. Louis and the state of Missouri have conducted their excellent work toward perfecting our war preparations by contributing to the Navy a body of men who both in number and in quality are representative of the finest spirit of our state—men who will keep in mind always the motto of St. Louis, "To the Front," and set the pace for those less fortunate individuals coming from other sections of the country.

As you know, the city and state have been able to make this wonderful contribution to the Navy through the unselfish coordination with which they have united their work into one effective plan.

On a previous assignment to recruiting duty in 1908 my first idea was to assure myself that the Navy supplied a need in the lives of the young men who enlisted—that it opened to them, through its training, an opportunity for travel, a wider sphere of usefulness than would have been possible in that individual life without the broadening and humanizing effect of the Navy associations.

To ascertain just what the Navy meant to each individual man I instructed each individual recruit fully and freely just what his naval experience taught him.

After a year of service a circular letter was sent to every recruit asking him that he tell me what his experiences had been, whether the Navy had benefited him or not, and whether he was glad that he had enlisted. The answers to these letters gave the Recruiting Officer a faith in the efficiency of the naval training which has been an inspiration to better service for the navy man.

Realizing that the best results could be gotten from the men only by coordination with their people at home, circular letters were written to the nearest of kin of all the men who had been in the service for at least a period of one year asking them how the Navy had benefited their boys and whether they regretted having allowed them to enter the Navy.

The constant recurrence of one particular phrase in the answers to these letters is worthy of note. This phrase, "It made a man of my boy," puts in a single sentence the life message of service which is the heart of naval work.

To ascertain whether the opportunities which the Navy gave to the men enlisting made them better men in the business world, letters were written to the President of the United States

Steel Corporation, the general superintendent of the United States Mail Service, presidents of the largest railroads of the United States and other largest employers of labor in the country.

Favorable answers were received in all cases where records were kept. The letter from the president of the Steel Corporation was so unusually favorable in its expression of opinion of the results of naval training on the industrial efficiency of its men who had had that training that the Navy Department authorized making an electroplate of this letter and using thousands of copies of it as navy recruiting literature. This letter showed that naval service made men quick, bright, alert, better able to understand and execute orders, and to compel quick and accurate obedience to his own orders, than the average man.

Knowing that the Naval Service benefited the men—knowing in other words that the Navy Department in asking men to make safe the sea lanes through which the flower of the young men of our country had to pass before being able to fight the battles of liberty, the next step was to find the best means to acquaint every young man in St. Louis and the state of Missouri of this opportunity for direct and effective service.

Realizing that the citizens of the city and of the state were much better qualified to determine the best methods by which they themselves should make their willing and enthusiastic contribution to the Navy, the recruiting officer requested the assistance of Governor Gardner, Mayor Kiel and a committee of the leading citizens of St. Louis.

These citizens formed themselves into a Citizens Navy Recruiting Association and at once took up the proposition of putting the Navy before every available young man in the district. An analysis was made of all probable means by which the message could be sent.

Personal solicitation being of course one of the most direct and effective means of communication, all the enlisted men attached to the station, the enlisted women, the families of enlisted men attached to the station, the families of enlisted men on board ship and at training stations, and business men having contracts for navy material, were all requested to aid, and they did so most effectively.

Public speaking by navy men and by patriotic citizens afforded another form of personal solicitation which was found to be exceedingly valuable.

Instructive entertainments of all kinds were used, navy material display, including navy mines and naval torpedoes, guns, shells, etc., minstrel shows, band concerts, moving picture shows and parades, all aided in intelligently

* Read at the meeting of the St. Louis Medical Society, Feb. 23, 1918.

guiding and directing the enthusiasm of the district.

Tack cards and posters were placed through the city, along the automobile roads, and through the country roads.

The Navy Drum Corps, a volunteer organization, and the naval scouts composed of boys from 14 to 18, both contributed most valuable service in this connection.

The postmasters of every city used every effort to make the message plain to each of the available young men they could reach.

Newspaper advertising and magazine advertising, using display want advertisements, news stories, narrative and instructive stories carried the message to a wider audience still.

The bill boards paid for by the regular navy and also by the civilian navy recruiting stations were used. Hand bills, posters, window cards and street car cards, on the front of the cars, were all effective.

The most excellent and effective work done by your able and efficient Governor Gardner was one of the big factors which made our campaign a success. Mrs. Gardner consented to act as the chief lady district recruiting agent and under her direction a corps of 275 women selected by the mayors of as many towns organized a service which helped a great deal. Why is France with her small population and restricted raw materials able to maintain her tremendous army at the front and yet to produce a greater volume of munitions, up to a short time ago, than the United States has been able with all its unlimited resources to produce? The answer is in one word, "The Women of France." Official documents state, nation wide investigations and official reports of all kinds show, that the women of France are giving hearts, minds and souls to the service of our country in living exemplification every day of our Saviour's command to love thy Lord, thy God, with all thy heart, all thy mind and all thy soul. Without regard to hours, without regard to wages, without regard to anything except the overmastering passion of efficient service for their home, France, they are at present carrying through in a miraculous way the unprecedented burdens of production which they have so cheerfully assumed.

One foreman receiving a salary of \$120 a month was at the time of a certain investigation instructing a woman of his class in the duties of forewoman in the munition shop. This man knew that the sooner he instructed this woman in the duties of the position the sooner would he have to take his place in the mud and danger and vermin of the trenches; and yet with every ounce of energy in his power he was instructing his woman successor quickly, efficiently and wholeheartedly to perform his duties, if possi-

ble, more efficient than he himself had performed them.

Our women in America have exactly the same spirit. They are begging that all their time and all their enthusiasm and all their power be utilized to save the lives of their sisters and brothers on the other side.

The assistance given by the women in every one of the activities above mentioned was unequivocally indicative of this spirit. The work of the Lady Navy Recruiting Agents under the leadership of Mrs. Gardner and Mrs. Benoit was most efficient. The pledge-a-man campaign among the working girls utilized in a wonderful way their desire to cooperate.

Calumet Building.

THE ST. LOUIS QUARTERMASTER DEPOT*

JOSEPH TAYLOR CLARKE, M.D.

Colonel, Medical Corps, U. S. Army

JEFFERSON BARRACKS, MO.

I have been requested to address this meeting by Dr. Falk, and with much hesitation have consented to do so.

The doctor said he wanted me to tell what was going on in the Medical Department, and I fancy that what he really meant was the answer to the question: "In case I have accepted or determined to accept a commission in the Medical Section, Officers' Reserve Corps, what have I to expect?" I shall endeavor to answer that question briefly and, I hope, not in exactly.

In the first place, in order to understand what the duties of a Medical Reserve Corps officer may be, it will be necessary to go very sketchily into the organization of the Army, of which all Reserve Corps officers form a part.

Let us take the organization of the infantry, because it may be said to be typical of the organization of all other combatant branches. To begin with, the smallest unit considered is the company,—a collection of soldiers commanded by a captain assisted by two or more lieutenants. The next higher unit is a battalion, usually composed of four companies. Three battalions, plus several companies not in battalions, constitute a regiment. Attached to the regiment but not borne on its rolls is a detachment of sanitary troops. Under the old tables of organization this detachment consisted of one major, three captains or lieutenants and twenty-four enlisted men. Here, then, is the first place where we meet the medical officers. What their duties are I will outline later.

Now, plans of organization change rapidly in war and what may be the allowance of medical

* Read at the meeting of St. Louis Medical Society, Feb. 23, 1918.

officers today may not be the allowance tomorrow. It has been suggested that we have battalion surgeons instead of regimental surgeons, since the present infantry battalion has upwards of a thousand men and may act more or less independently. Whether this change will be made I do not know and really, for our purpose, it makes little difference. The main point is this: That as there will probably be several million combatant troops enrolled before the close of the war it is more than likely that the majority of doctors who accept commissions in the Medical Reserve Corps will do duty as regimental medical officers during perhaps the larger part of their military career.

Regiments are combined into brigades. The typical infantry brigade is composed of two regiments, plus some auxiliary troops. It has no separate medical or sanitary organization unless it should be acting independently. The next unit which we have to consider is a division. The division is the first unit with which we meet that is capable of an entirely independent existence under our present tables of organization. It consists of two brigades of infantry, one brigade of artillery, a regiment of engineers, a field battalion of signal corps, some additional supernumerary troops and its trains. These consist of motor truck companies, wagon companies, pack trains, etc., and they furnish ammunition, rations, and stores of all kinds. The train that concerns us principally is known as the Sanitary Train. The sanitary train comprises four field hospital companies and four ambulance companies. I do not purpose to go into the composition of any of these sanitary units. As I said before, changes frequently occur and what I might tell you now would perhaps be all wrong in a week. However, the sanitary organization of a division includes all of its medical personnel,—detachments attached to regiments, the sanitary train, a division surgeon and his assistants. All this personnel and all their material is used for the purpose of relieving the sick of the division on the march and above all, for the transportation and care of its wounded.

When an army proceeds to invade foreign territory, it establishes what is known as a "base." In the case of American troops in France, it is supposed that our base is some French seaport. In this base what are known as supply depots, medical and otherwise, and base hospitals, are established. As our troops occupy positions on the line of battle they will necessarily move further and further from their base. The space of territory over which supplies are forwarded to the Army, reinforcements go forward, and the sick and wounded are evacuated to the base, is known as the line or "lines of communication."

I said that base hospitals would be estab-

lished at the base. This is not altogether the case. Many base hospitals have been and will be established in the interior of France at greater or less distance from the firing line. The term "base hospital" one might think would refer only to a hospital situated at a base, but the term is used to designate an organization in the interior, as at present organized to take care of about 500 patients.

Along the lines of communication, as supplies and reinforcements move forward, there is a constant returning stream of the wounded and sick. Evidently, these unfortunates cannot all be transported to the rear in ambulances. Railroad trains, canal barges and steamers are used for this purpose, according to the circumstances. It is evident also that there must be certain collecting points for the sick and wounded. In our service, hospitals which perform this function are known as Evacuation Hospitals. Two or more are allowed to each division. Further to the front still the Field Hospitals of the Division Sanitary Train function. These receive the wounded from various sections of the division on the firing line. The wounded are transported to field hospitals from dressing stations, so-called, which are in charge of ambulance companies and are established and evacuated by them.

Still further forward are the first aid posts—one or more to each regiment. These are in charge of the regimental personnel and are the first places at which the wounded receive anything like systematic aid.

Every soldier, combatant or otherwise, carries a first aid packet. Should he be wounded, this is applied by the soldier himself or by a member of the regimental sanitary detachment.

In order to recapitulate and show the course of the wounded man from front to rear, we will suppose that some man has been badly wounded in a trench. He is attended to, as stated, by himself or his comrades, the first aid packet being applied. Should a soldier of the sanitary detachment be available he may not only oversee the application of the dressings but may also administer stimulants. Following this the man is moved as rapidly as possible (consistent with safety) to the rear through a communicating trench, or at night over less sheltered paths, to the first aid station with as little exposure as possible. The first aid station is as well sheltered as circumstances will permit, but under conditions of trench warfare it must necessarily be in an exposed place. Ruins of houses in nearby villages, i. e., cellars, or dug-outs, are utilized for this purpose. Here the wounded man receives somewhat more attention, but in the nature of things it is not advisable to attempt too much. Later, when circumstances permit, the wounded soldier is conveyed to the

dressing station. This must all be done, as a rule, by the regimental personnel.

After he reaches the dressing station he finds more comfort. The shelter will probably be a little more elaborate and probably his removal to the field hospital will be rapidly accomplished. His transportation to the field hospital is a function of the ambulance company. Field hospitals are not intended, however, to keep any more wounded soldiers than is absolutely necessary. From the time a soldier is wounded the object and aim of everyone in the sanitary service is to remove him, as quickly as possible consistent with safety, from what is known as the "Theater of Operations." The limit of this zone of advance or "theater of operations" is usually some rail head, at which point an evacuation hospital is established. Evacuation hospitals, in turn, use every endeavor to return the patient to one of the many base hospitals in the interior. In this latter place the soldiers will receive the very best of treatment and care, but again every endeavor is made to prevent base hospitals from being, in their turn, overcrowded. Even in France, I fancy, what are known as General Hospitals will be established, at which wounded soldiers will receive prolonged treatment, and it is only those who are permanently disabled for the military service or whose convalescence promises to be exceedingly prolonged, that will be returned to the United States.

A great number of Field Hospitals, Ambulance Companies and Evacuation Hospitals all have to be officered and manned by the Sanitary Service. The same is true of the military hospitals in the interior, whether they be base hospitals or general hospitals. I believe that while the greater part of Medical Reserve Corps officers will be engaged as regimental medical officers, probably the next greatest proportion will be in the ambulance companies, field hospitals and evacuation hospitals. The base hospitals will probably contain the third great division of medical officers, while the general hospitals and those in this country should take a lesser number. It is impossible for me to state what division is to be made of Medical Reserve Corps officers or of any medical officers or any other branch of the sanitary service. It is probable, however, that the older men should they be sent abroad will not have duty with any of the ambulance units of the sanitary service.

A good deal I have heard said about medical officers or reserve officers who expect to give part of their time, and about medical men not in a position to accept commissions in the Reserve Corps who expect to give part of their time to government service. I believe before the war closes opportunity will be given to

many of these medical men to render service to their country.

Perhaps it might be well to sketch now the duties which Medical Reserve Corps officers may be called on to perform. The regimental surgeon is sanitary advisor to the colonel of the regiment. He is responsible for the sanitary measures conducive to the health of the men. He treats the sick, recommends their disposition as to hospital or quarters, and sees that all are taken care of. This may seem a comparatively easy matter but I assure you it is not. Normally he has three assistants and his detachment consists of twenty-four men but the exigencies of the service frequently leave him with a very small proportion of these to deal with the gravest situations. In the field, particularly in battle, where larger numbers of wounded suddenly are thrown upon his care, his ingenuity and energy will be taxed to the utmost. His will be the deciding voice as to how and when these men are to be evacuated to the first aid station without undue risk to them or to the litter-bearers. At the conclusion of a pitched battle the responsibility for the collection of the regimental wounded largely rests upon him and his force, and he may often find himself with insufficient means to take care of those for whom he feels responsible. Let no man think that in the medical department there is any more responsible position. In my judgment there is not.

Personally speaking, I look back on my service as regimental surgeon during the campaign around Santiago as the time when I did my very best work and the satisfaction which it gave me at that time still remains with me.

The duties of an officer with an ambulance company are also of a very strenuous nature. The establishment of a dressing station is left usually to the judgment of the senior medical officer, known as the Division Surgeon. Under him is a Director of Ambulance Companies who personally attempts to locate these dressing stations. As far as is possible these stations are designated in what are known as "Combat Orders," with the sanction of the Commanding General of the Division. The fact is, that in large operations it is often bound to happen that the dressing station is established either automatically because of the larger number of wounded at some first aid station which is favorably sheltered from fire, or it is established on the sole judgment of the commander of the ambulance companies.

Things don't always work out in warfare particularly in battle, exactly as planned and the commander of an ambulance company cannot defer the opening of a dressing station too long in order to literally comply with a combat order.

Field hospitals are usually supposed to be

located beyond the range of heavy artillery. This was the old idea. With modern artillery such procedure is absolutely out of the question. I believe that a distance of perhaps four miles will be the average from the firing line. The commander of a field hospital establishes his formation under orders from the division surgeon. It may be that not all four of these formations will be open at the same time. Some may be held in reserve.

We are apt to think of warfare, in our time, as partaking of trench operations solely. While this seems to be largely the case at present, it was not so in the opening phases of the present war and very possibly the time will come when battles in the open field will again be fought. The principles, however, are largely the same whether trench warfare prevails or pitched battles are the rule. In either case it is wise to retain a certain number of field hospitals ready to be set up at any point where casualties happen to be thickest. The responsibility of the officer commanding the field hospital is certainly very great and he has no means of limiting the number of wounded thrust upon him. The evacuation of the wounded from the field hospital to the evacuation hospital does not rest with him. He notifies the evacuation hospitals and they in turn notify ambulance sections stationed along the line of communication, which move forward and remove the wounded to the rear.

In an evacuation hospital very much more elaborate equipment exists than in the field hospital and it is likely that at this point the first use will be made of the x-ray as an aid to diagnosis. Formal operations in the field hospital as a rule are limited to those of emergency required to save life. In an evacuation hospital more extensive dressings and operations are performed, always however with a view of retaining patients as short a time as possible. Here is where the responsibility and judgment of the commanding officer of this hospital comes in. He must determine how many men he can evacuate with rapidity in order to prevent his formation from becoming congested. As already pointed out, he has at his command practically all the resources of the line of communications and from information furnished him he routes his patients as far as possible to base hospitals prepared to receive them. The service in base hospitals does not differ greatly from that of general hospitals in times of peace, except that certain hospitals will accommodate wounded of particular classes, while some may have various classes of diseases; still others will more nearly approximate general hospitals in cities taking patients of all classes.

It is unnecessary to dwell upon the multiplicity of duties in these establishments or in the general military hospitals. I wish next to

call attention to military titles as I think some confusion may have arisen in the minds of civilian practitioners. The title "Surgeon" is applied to the Senior Medical Officer or Medical Reserve Corps Officer on duty at a Post or Camp. Should he be the senior on duty with a brigade, his title would be "Brigade Surgeon." Should he be the Senior Medical Officer serving with a Division, his title would be "Division Surgeon." Thus far I have said nothing about units of organization larger than a division. Divisions, however, will be combined into Army Corps, a corps consisting of probably two or three divisions. The title of the senior medical officer serving with such an organization is at present Chief Surgeon, Such-and-Such Army Corps. Army corps, in turn, are combined into Field Armies, the title of the ranking medical officer being Chief Surgeon, Such-and-Such Field Army. Again, field armies will be combined into an army or armies, and the title of the chief medical officer will be "Chief Surgeon." This is all in accordance with military custom. The fact that a man is designated as "Surgeon" or "Division Surgeon" does not indicate that he has special knowledge of surgery. There was a time when, in addition to the ranking officer in the United States Army Medical Corps now known as The Surgeon-General, there was also a Physician-General but this office has long since been abolished. In speaking of rank, it may be well to state that although the ranking medical officer of a regiment is known as The Surgeon, officially, still his military title, as shown in his commission will be probably that of major, and he is so addressed personally. The same is true of other senior medical officers. The division surgeon is usually a lieutenant-colonel and is addressed as "Colonel." The chief surgeon of a corps will probably be a colonel; of a field army, a brigadier general; and it may happen, if the Owen Amendment is passed, that the chief surgeon of a field army will have the rank of a major-general.

Another thing to which I believe it worth while to call attention is the employment of medical officers in their specialties. Instructions from the Surgeon-General's office relative to the filling out of applications for commission in the Medical Section, Officers' Reserve Corps, contain a list of no less than forty-six specialties and it is desired that the applicant state whether he has specialized under any of these heads. It seems to me that this clearly indicates the intention of the War Department to employ men, as far as possible, in their specialties, i. e., in plain language-to put the round peg in the round hole. Now I don't wish to discourage anyone but I can assure you that it will frequently happen that the round peg will have to adapt itself to the square hole the best way

that it can. It may well happen that an eminent neurologist will find himself paying careful attention to collections of mumps or measles; that the obstetrician will be digging into the questions of public health and sanitation, and many other unusual duties may be thrust upon him. Of course those officers who are ordered to training camps for medical officers will in a large degree be prepared for just such contingencies, but not all medical officers will go to training camps, and I wish to prepare these for conditions which very often exist. I don't believe that anybody will be greatly injured, or will display any unwillingness in taking up unwonted, unfamiliar duties. As far as my observation goes, everyone with whom I have come in contact has shown willingness to do whatever duty presented itself, without demur or other thought than that it was a duty to be performed like any other.

I suppose I might say a few words in regard to the Owen Amendment. I do not know whether this is really in order, but I am sure that what I say is innocuous enough to draw no criticism from the War Department, should it come to their attention. There is only one object which at present confronts all Americans—and every American—and that is, what will help to win this war? I believe that the passage of the Owen Bill will put medical officers of all classes in a better position to aid the common cause. I believe that as a profession we are ready, without any decided material advantage to ourselves, to take whatever rank and pay the government may decide to give us, but the contact (which must be intimate) between medical officers of our service and the services of our associates is such that unless we have rank corresponding to their own we work at a great disadvantage. This, to me, is the desirable feature of Mr. Dyer's amendment to the Owen amendment. Many of you heard his address on the subject recently delivered at the St. Louis Club. I think you all concur in his views. As for me, I know I do, and the reason I have given is, to my mind, the paramount reason for my hope that such legislation will be passed.

In conclusion, I would call attention to the fact that wherever I have been among medical men recently, a great deal has been said about the sacrifice made by the civil practitioner when he gives up his practice to enter the Army. Now, I have agreed in everything that has been said on this subject but I wonder if those who talk really understand what that sacrifice is. It seems to me that a young man who enters the Army as a Medical Reserve Corps officer, when he returns to his home will have a wider experience than he could possibly obtain in any other way. I don't care what his specialty is, or if he has none but that greatest of all special-

ties—general practice—he is bound to be greatly benefited. To older men the giving up of a practice and receiving lower pay is certainly a sacrifice of magnitude. However, I don't think that any of these things should count nor do I believe that they do count with most of us. We are fighting in a holy cause, in a desperate struggle, which promises to be long-drawn-out. We should be prepared to make any sacrifice, all sacrifices, even to the last; and I hope, I trust, I believe, that the medical profession of the United States stands ready, even as the early fathers of the Republic who, when they signed the Declaration of Independence, pledged to their cause "their lives, their fortunes and their sacred honor."

FRACTURES OF THE FEMUR*

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Before taking up fractures of the thigh, it might be well to review briefly a few anatomical points.

The articulation of femur and ilium is a little less than a right angle, while the angle of neck and shaft varies from 115 to 140 degrees. Both in men and women alike it averages about 127 degrees. Children may show a few degrees variation (Sharpey).

The head of the femur is held in the acetabulum by the strong ligamentum teres. The capsular ligament which runs from the margin of the acetabulum and from the cotyloid ligament to the spiral on the front and to the back of neck, is strengthened by the pubofemoral, ilirotrochanteric, ischiocapsular and iliofemoral ligaments. The latter, known as the Y-ligament, is attached to anterior inferior spine of the ilium and inserted into the neck near the intertrochanteric line. The cotyloid encircles the acetabulum.

The neck is wedge-shaped, narrower at junction of head, but broad at its base where it articulates with shaft. It is flatter in front and more convex and stronger behind. A ridge serving as attachment of capsular ligament runs from the greater to the lesser trochanter, known as the intertrochanteric line. The inferior surface forms a strong, thin arch known as the Adam's arch.

A fossa on the inner side of the great trochanter serves as an attachment of the obturator muscles. The glutei muscles are attached to greater trochanter, the iliopsoas to lesser, and form important actions in fracture displacements.

Fractures of the head are comparatively rare

* Read before the St. Louis Medical Society, Feb. 2, 1918.

and only produced by severe direct violence, while fractures of the neck are common after sixty and form one-third of all fractures after seventy years of age.

It is on account of a process of osteoporosis, a thinning of Adam's arch and eccentric atrophy after 70, that fractures of the neck are so common. The lamella of the spongiosa is filled with large spaces filled with marrow.

Fractures of the neck may be intracapsular or extracapsular or mixed.

Force applied in a vertical direction to the foot or knee produces an oblique fracture near the head or toward the middle. Force applied to the great trochanter direct from the side pro-



Fig. 1.—Intertrochanteric fracture of hip. Considered the most frequent type of hip fracture by author. (Retouched.)

duces an impacted fracture of the neck at its base or impacted fracture of the anatomical neck with splintering. Force from before backward, a transverse intracapsular. Forcible rotation of thigh often results in incomplete impacted fracture.

Muscular action, as in lifting heavy weights or slipping when the body is thrown backward quickly to check the fall, hyperextension of the hip joint, tightens the iliofemoral ligament and the latter by reason of its great strength tears the neck from its base.

In extracapsular fracture the line is clear in front and jagged behind, while the Y-ligament remains attached to the neck.

A fracture that has been very common in my experience and one I believe that usually results in fair recovery is the intertrochanteric. The

line of fracture follows the intertrochanteric ridge, the lesser trochanteric is also separated, the neck is pulled forward and downward by the Y-ligament, while the glutei muscles pull the shaft backward, upward and inward. The lesser trochanter is pulled to the median line slightly by the iliopsoas.



Fig. 2.—Splint devised by author for treatment of hip fracture in the very aged.

This is generally impacted like most extracapsular fractures. The intracapsular are as common as the extracapsular.

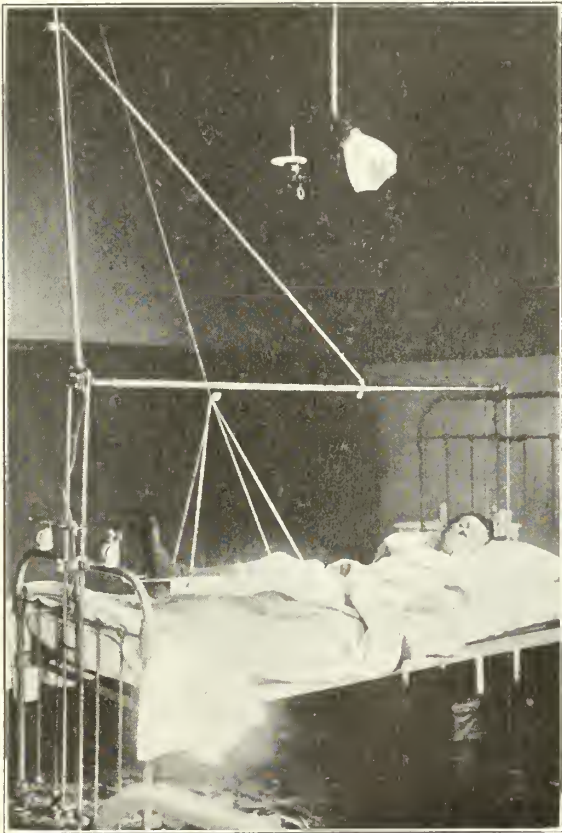
The symptoms of fracture of the hip are subjective and objective.

The subjective: Pain referred to back of hip, side, groin or knee, depending on site of fracture. Loss of function is generally present,

always in intracapsular and generally in extracapsular, unless there is firm impaction in which case the patient may be able to elevate the leg but cannot bear any weight on it, as in walking.

In one case in my series the patient had a fracture of the great trochanter and was able to walk in the hospital.

The objective symptoms consist in deformity and swelling. The inguinal fold is obliterated and some swelling may be seen about the trochanter. The space between the iliac crest and great trochanter is deepened and the gluteal fascia lata muscles are relaxed. The limb usually is shortened 1 to 4 inches and everted.



3. Hodgen splint with the Rausch extension apparatus.

The heel of the injured thigh is usually reposed in the fossa above the os calcis on the sound limb.

The diagnosis of fracture of the hip is not very difficult, especially if aided by the invaluable assistance of a good x-ray picture. The characteristic deformity, the everted shortened limb and the loss of function are characteristic. Crepitus and false motion are often elicited but should not be sought after for fear of breaking up an impaction. The shortening of the base of Bryant's triangle is a well known symptom.

Hodgen remarked, "If as a result of a fall on the hip an elderly person is unable to use

the affected limb, it is largely probable that there is a fracture of the neck, the more so if no especially great violence was applied in the fall, such as would be necessary to produce a contusion of a sufficient severity to render the thigh useless."

Contusions in a few days show improvement, fractures do not.



Fig. 4.—Splint applied to adult.

Prognosis should be guarded. Immediate fatal results follow the forced reclining position of an old person who has been previously active. Hypostatic pneumonia, fat embolism, bed sores and urinary infection often cause death in a few days.

Intracapsular fractures seldom result in bony union and when it does take place, the neck is absorbed and the head becomes adherent to the

great trochanter, although in rare instances intracapsular fractures heal by bony union.

False joints are the rule after intracapsular fractures and these may indeed become quite serviceable to the patient. The reason why bony union is rare in intracapsular fracture is apparent, when we consider that the nutrient vessels enter the neck about its middle and the vessels of the capsule are destroyed on account



Fig. 5.—Same splint adjusted to child.

of the rent in the capsule, the head suffers for want of blood supply. The vessels entering the head with the ligamentum teres are inadequate. The neck of the femur is not supplied with real periosteum.

Extracapsular fractures seldom make a perfect recovery, fully 77 per cent. remaining either partially or totally disabled.

Treatment consists in, first: The general good care of the patient, preferably in the upright or partially upright position. Second: Reduction, at the same time being careful not to break impaction. Third: Some good retention apparatus.

In intracapsular fracture the removal of the head is advised by some surgeons. Of late years bony peg autogenous graft is to be recommended. Wire or steel nails are to be disregarded. Putting in a bone peg is not without its corresponding danger. Care should be taken that the bone peg does not split the head or acetabulum. In one patient in the practice of another physician this peg was not only pushed through the acetabulum but subsequently came out of the abdomen in the pubic region.

To perform this operation logically, two incisions should be made, one anteriorly along the inner side of the sartorius; the neck should be



Fig. 6.—Autogenous bone graft 6 inches long inserted to replace 4 in. loss of the shaft of femur.

exposed and the length accurately measured; and another incision should be made over the great trochanter. The peg should be directed in place accurately by means of these two openings.

In the young, adult or middle aged, Whitman's plaster cast with Buck's extension seems the choice of retention splints.

Past sixty we should resort to the splint designed by one of our honorable deceased surgeons, Hodgen. This splint when properly applied, fits admirably the requirements. It is essential that some intelligent person give it constant, proper attention. Our electrician, Mr. Paul Rausch, has invented an adjunct to the Hodgen splint which has been used with great advantage at St. Mary's Infirmary.

Liston's splint and Buck's extension have their places.

A splint devised by myself and manufactured

by Mr. William Kleine has some advantages, especially in the treatment of the aged.

It is constructed of steel, can be applied to adult or child, allows flexion of the hip and knee, and in fact forms an ambulatory splint. It is best suited to the aged, when it is very necessary to get them out of bed early, or at any time. It allows flexion of knee and prevents many troubles that often occur in this region when other extensions are used.

Thomas, Bruns and Hessing have invented splints that are suitable in many cases.

The Thomas splint to my mind does not immobilize the hip joint sufficiently and on account of the circular pad in the groin, is uncomfortable.

Metropolitan Building.

THE BINET TESTS AND THE PROBLEM OF THE FEEBLEMINDED*

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Any one who has had much to do with children must have noticed how rapid is their mental development and what wonderful changes this mental development brings to them. It is not that the child learns new facts quickly, for in truth it does not. The brightest pupil in our schools can not learn new things as readily as a well-trained adult. But the child learning new facts takes on new powers, becomes a new creature, while the adult remains the same old person.

This is illustrated by showing a certain picture to a child 3 years old and asking him what he sees. He will say he sees some men, some boards, a saw, some nails, an ax, and a house. At 7 years he will say he sees a man sawing a board, another chopping, and another driving nails in a house. At 15 years he will say he sees some men building a house. The child at 3 years sees the objects, the concrete things, as well as he ever will. At 7 years he sees the doing, the action; but the youth of 15 sees the purpose of the action, and beyond this he will never go. Again, a child at 5 years can copy the figure of a square, but not that of a diamond. That comes two years later, when the child is 7 years old. If the child is less than 11, you can tell him that you have locked yourself in your room and can not get out because you left the key on the outside, and he will believe you. At 14 years, given the position of the hands on the face of a clock, any proper child can tell you what time would be indicated if the hands were reversed.

These and other tests definitely show stages in the mental growth of children, and the presence of these stages is the fundamental idea in the Binet-Simon scale for measuring intelligence.

The French psychologist, Binet, has worked out a series of tests so standardized that they show with wonderful exactness inherent mental qualities. By their use it is possible to tell not only what a child is, but what it is probable that he will be. As an example: If I were to say 2-4-9-5-8-3-7, all those who hear me today could repeat the series at once without an error, although the series would be forgotten in a half a minute. If I were to recite a series of eight figures, or names, almost if not all my hearers, together with all other bright people, could repeat them as in the series of seven numerals. But it is a pretty smart individual who can carry nine; and I would like to have the income anyone who can carry ten or more can command. The great majority of mankind can carry seven, as can also the youth of 12 years. At 10 years the child breaks down on seven, but can carry six. At 8 years he can carry five; at 5 years he carries three, and at 3 years he can repeat two. All this is independent of any training or learning by rote. It is altogether different from a school examination, which is a test of what a child has been taught, or rather of what he knows—tests of attention, tests of the grip of the memory; tests of the quality of the very protoplasm of the brain. Moreover, they are as definite and exact in their results as the stretch of the hand over the piano keys is a measure of its size and suppleness.

It has been determined that the very brightest minds attain their maximum of development and slow down and stiffen into fixity at or before 40. The average professional mind stops at about 20, while the great mass of mankind stop mental growth at from 15 to 20. This does not mean that we can not learn new facts or do new work after that time, but the learning of these new facts does not give us new powers, does not make a new creature of us as before, but we remain the same old person.

The Binet tests thus enable us to measure the mental age of persons under 15 years of age with as much exactness as we are able to match colors on a color scale. Now, if a child is found to be lagging one or even two years behind his birthdays he may, by special training and special care, be enabled to catch up. He may be a little slow, but he is recognized as normal and can get along. The mind that slows down and stops at 13 is barely able to make a living and care for itself through life, but since it is able to care for itself it is recognized as normal, being only two years behind. But if found to be three years behind, it is feeble-minded, due to inherent defect and can never be normal.

* Read at the Sixteenth Annual Meeting of the Frisco System Medical Association, Springfield, May 28, 29, 1917.

The feeble-minded group is divided into three classes, namely, the idiots, the imbeciles and the newly recognized type of feeble-minded, the morons. The idiot's mind has stopped growing at or before 3 years. The imbecile's mind has stopped after three years, but before 8 years, while the moron's mind has grown past 8 years but has stopped before 13 years. Each of these classes is again subdivided into three groups, called the low grade, the middle grade and the high grade, or, in other words, we have the low grade idiot, the middle grade idiot and the high grade idiot; then the low grade imbecile, the middle grade imbecile and the high grade imbecile; the low grade moron, the middle grade moron and the high grade moron. Although it has not been done, so far as we can learn, this subdivision might well be carried on into the normal; and we would have the low grade normal, the middle grade normal and the high grade normal.

The line between the high grade feeble-minded moron and the low grade normal has been so indistinct and so ill-defined that the problem of separating these two classes has heretofore been approached with timidity or shirked in many instances. The psychologist has been inclined to place the line too high, including in his list many persons that were able to take care of themselves, though in a rather poor manner. On the other hand, the courts, the governmental machinery and the great mass of mankind were prone to put the line too low; and many dependent men and women, who are really only little boys and girls of 8 or 10 years old, are held responsible and often severely punished because they do not conform to the social and industrial requirements of a community of grown-up, normal men and women. It would seem that it is less repugnant to the feelings of a majority of normal mankind to consider their less fortunate fellows as vicious and immoral, rather than defective and feeble-minded.

The idiot, whose mental growth stopped before he was 3 years old, is easily recognized by most observers. They are the helpless, sprawling, dirty, bestial creatures we have seen or known in some unfortunate family or in some state institution. Their very helplessness robs them of much harm and they live their lives without reproduction and pass on. These and the imbeciles of all grades are much alike in being a source of anxiety and distress to their immediate friends, and oftentimes a charge on the state; but their mental deficiency has so distorted or marked their physical bodies that they are easily recognized and so cared for. The imbeciles and the low grade morons make up that pitiable class that go about communities known as "Simple Simon" or "Crazy Jane," or some such familiar term. They are a constant

menace to our welfare, to be sure, but we are all able to recognize them and so in a good measure guard ourselves against them. But the high grade moron is a very different proposition and his problem is very much more difficult.

One difficulty in the proper understanding of feeble-mindedness is our preconceived notion that the idiots and the imbeciles solely comprise the feeble-minded class. We all know people who do not get along well; people who do things that make us call them "fools," forgetting that this very thing means irresponsibility; people who cannot do anything well, who cannot be trusted to do a day's work of even the simplest manual labor undirected or without supervision, the ne'er-do-wells, the incompetents; people who apparently are not at all able to live in conformity with the laws of society. These people drift along in their helpless way until they become dependents; either dependent paupers in our almshouses or dependent criminals in our jails and penitentiaries, or become a plague in our communities. We have been able to do nothing much for them, or rather, we have not recognized that we should do much for them, until they have gotten into that manner of life and living that we do not care to disturb.

By means of the Binet scale of intelligence we are now able to pick these people out while they are yet children and give them the special care and training their defect requires. By special training a child only two years or less behind his birthdays may be enabled to get along as a normal person although a little slow. But if he is three years behind, he is feeble-minded.

Now a feeble-minded person is not able to compete with the normal in the struggle for existence; he is not able to manage his affairs with prudence. The consequence is when he gets out in the world he cannot live a normal life. He cannot be allowed to starve; so if he is of a dull nature he accepts charity and goes to the city or county for support. If he is of a different temperament he takes matters into his own incompetent hands and tries to live by his wits, or he steals what he can not earn. The jail or the penitentiary soon finds another victim. If the person is a female, her natural sex instincts, together with her lack of intellect to control them, makes it almost certain that she will quickly enter a life of prostitution. Statistics on these matters are not full, but such as have been gathered show that at least 30 per cent. of the convicted criminal class are feeble-minded; and of alcoholics 30 per cent. are feeble-minded. About 99 per cent. of prostitutes and girls over 15 years of age in houses of correction are morons, usually of the higher grades. It is further found, as far as investigation has been possible, that a very large proportion of the regular patrons of these prosti-

tutes are also feeble-minded. In other words, loose sexual habits either in the female or the male point very strongly and with startling accuracy to feeble-mindedness. When this is generally known and fully believed we will hear less boasting among a certain class of young men of their amours and escapades.

In addition to the heavy burden these criminal and social outcasts are upon society, the morons, whether depraved or not, are an element of danger in any community, because having and adult's physical strength they have only a child's judgment to direct it; and like a child they may fly into a rage at any time and do murder or any other crime, not having mental capacity properly to foresee or estimate the effect of their acts, either upon themselves or others.

To get the picture of the class of defectives we have been trying to describe more vividly before you, let us quote a description of a young man, an inmate of the New Jersey Training School for Feeble-Minded, given by Brewster in McClure's Magazine: Here, for example, is a young fellow of 20—strong, well set up, open faced, altogether a distinctly pleasing personality. He has been working hard all day breaking up new land, and has come in at night comfortably weary, gloriously hungry and ready for bath and supper. Question him about his occupations, interests, companions, and he answers promptly and intelligently. Inquiry shows that he leads the school orchestra, takes part in theatricals, does beautiful work at two handicrafts, and in addition is a crack athlete, quite able to hold his own on track or diamond against most college boys. He looks, in short, like a distinctly promising youth, of whom almost any parent might be proud. But take him into the laboratory and put him through the Binet tests and he breaks down at thirteen. He was a likely baby. His mind developed normally during early boyhood. At 8 or 9 it began to slow down. At 12 it stopped. No matter how long that man lives he will never be more than 12 years old. Meanwhile, he will do everything that a child of 12 can do and do it with a man's strength. He can accomplish almost any sort of routine task—care for stock, lay bricks, work at tailoring, perform any mechanical operation as well as anybody, provided somebody else plans his work. But he cannot plan for himself, and he cannot take responsibility. Naturally not, since he is only 12. He has had ten years of the most painstaking, as well as the most thoroughly scientific education to be had anywhere in America—and it hasn't made a particle of difference. He knows more than a child of 12, because he has had twice as many years to learn it in; but his learning is all on the 12 year old level. All the range and grasp and

interests of the 13 year old mind are forever to him a closed book.

So long as this man is kept in charge of kindly persons who treat him as the 12 year old he really is, not the man he appears to be, and so long as he is given no task beyond those which careful tests show that he can do with ease and pleasure, he is happy, docile, affectionate. But let him out into the grown-up world and at once he is in six different kinds of trouble. He can not make a living at a man's work, because he is only a little boy; on the other hand, nobody will look out for him like a little boy because everybody takes him for a man. The outside world is not adapted to such as he; and therefore, according to his natural or acquired energy, he drifts into pauperism or crime. With the forethought of twelve years, he becomes responsible for a family which he can not possibly support. In a panic of childish jealousy or fear, he is as dangerous as a frightened horse. He has all the impulses of a grown man with a child's power to regulate them. Yet this man is very close to a normal individual.

Here again is another picture of a defective girl, this time drawn by Dr. Goddard, superintendent of the Training School at Vineland, N. J. The girl is 22 years old and has been in the institution fourteen years. She is cheerful, inclined to be quarrelsome, very active and restless, very affectionate, willing, and tries; is quick and excitable, fairly good tempered; learns a new occupation quickly, but requires a half hour or twenty-four repetitions to learn four lines; retains well what she has once learned; needs close supervision; is bold towards strangers, kind towards animals; can run an electric sewing machine, cook, and do practically everything about the house; has no noticeable defect. She is quick and observing, has a good memory, writes fairly, does excellent work in wood carving and kindergarten, is excellent in imitation; is a poor reader and poor at numbers; does fine basketry and gardening; spelling is poor; music is excellent; sewing excellent; excellent in entertainment work; very fond of children and good in helping care for them; has a good sense of order and cleanliness; is not always truthful and has been known to steal, although does not have a reputation for this; is proud of her clothes; likes pretty dresses and likes to help in other cottages, even to temporarily taking charge of a group.

After showing by the Binet test that this girl is only a little over 9 years old mentally, Dr. Goddard goes on to say: "This is a typical illustration of the mentality of a high grade feeble-minded person, the moron, the delinquent, the kind of a girl or woman that fills our reformatories. They are wayward; they get into all sorts of trouble and difficulties, sexually

and otherwise, and yet we have been accustomed to account for their defects on the basis of viciousness, environment, or of ignorance.

"It is also the history of the same type of girl in the public school. Rather good looking, bright in appearance, with many attractive ways, the teacher clings to the hope, indeed insists, that such a girl will come out all right. Our work with Deborah convinces us that such hopes are delusions.

"Here is a child who has been most carefully guarded. She has been persistently trained since she was 8 years old, and yet nothing has been accomplished in the direction of higher intelligence or general education. Today, if this young woman were to leave the institution, she would at once become a prey to the designs of evil men or evil women and lead a life that would be vicious, immoral and criminal, though, because of her mentality, she herself would not be responsible. There is nothing she might not be led into, because she has no power of control, and all her instincts and appetites are in the direction that would lead to vice. . . . The question is, How do we account for this kind of individual? The answer is in the word 'heredity'—bad stock."

Bad stock, of course, has no influence in accidental cases that come from birth injuries or early brain disease, and persons so afflicted do not transmit their defect to their descendants, but such cases are very few compared to the other class.

The burdens on society and the danger to individuals imposed upon the country by the present generation of morons is insignificant as compared to the vastly more important matters of their multiplication, and the yet more important matter of the heredity of their mental defect. Tregold, an authority of note, says that "feeble-minded people multiply at twice the rate of normal people," and feeble-mindedness is transmitted from parent to child and from grandparents to grandchildren with a sureness and a prolixity that is appalling. To illustrate what this taint of heredity means to society I quote from Dr. Goddard's recent book, "The Kallikak Family." "Just before attaining his majority Martin Kallikak, Sr., of good family, joined one of the numerous military companies that were formed to protect the country at the beginning of the Revolution. At one of the taverns frequented by the militia he met a feeble-minded girl by whom he became the father of a feeble-minded son. This child was given by its mother the name of its father in full, and thus has been handed down to posterity the father's name and the mother's mental capacity. This illegitimate boy was Martin Kallikak, Jr., and from him have come four

hundred and eighty descendants. One hundred and forty-three of these, we have conclusive proof, were or are feeble-minded, while only forty-six have been found normal. The rest are unknown or doubtful.

"Among these four hundred and eighty descendants thirty-six have been illegitimate. There have been thirty-three sexually immoral persons, mostly prostitutes. There have been twenty-four confirmed alcoholics. There have been three epileptics. Eighty-two died in infancy. Three were criminals. Eight kept houses of ill fame.

"These people have married into families, generally of the same type, so that now we have on record and charted eleven hundred and forty-six individuals. Of this large group, we have discovered that two hundred and sixty-two are feeble-minded, while one hundred and ninety-seven are considered normal, the remaining five hundred and eighty-one being still undetermined.

"Martin, Sr., on leaving the Revolutionary Army, straightened up and married a respectable girl of good family, and through that union has come another line of descendants of radically different character. These now number four hundred and ninety-six in direct descent. All of them are normal people. Three men only have been found among them who were somewhat degenerate, but they were not defective. Two of these were alcoholics and the other was sexually loose.

"In this family and its collateral branches we find nothing but good citizens. There are doctors, lawyers, judges, educators, traders, landholders, in short, respectable citizens, men and women prominent in every phase of social life. There have been no feeble-minded among them; no illegitimate children; no immoral women; only one man sexually loose. There has been no epilepsy, no criminals, no keepers of houses of prostitution. Only fifteen children have died in infancy. There has been one 'insane,' perhaps inherited, but not from the Kallikak side."

The history of these two families, living side by side in a rural community, is a very strong and conclusive proof of the hereditary nature of feeble-mindedness, and such cases are by no means limited to the Kallikak family in New Jersey, but many repetitions of them are no doubt all around us. It is conservatively estimated there are now present three hundred thousand feeble-minded in the United States and it has been definitely determined that 2 per cent. of the school children are feeble-minded; and of course they may be expected to grow up and propagate their kind. During the past ten years there has been an average of nearly twenty-five hundred immigrants entering the Port of New York every day. On one day

about three years ago a test was made by two experts from the Training School for Feeble-Minded at Vineland, N. J., who selected from the line of immigrants passing by them through the gate eighty-three feeble-minded persons from a total number passed that day of twelve hundred and sixty—or nearly 7 per cent.—seven persons in every one hundred were feeble-minded, coming here to our country, to strike at the very roots of the nation's existence. Because it is from these and their descendants that the criminal classes are largely recruited and they furnish the Guiteaus, the Czolgozes and Schranks, the Lefty Louies, the "Gyp the Bloods," and they start, as shown, vicious strains, leading to incalculable misery, pauperism and criminality in future generations.

The career of Martin Kallikak, Sr., is a powerful sermon against sowing wild oats. Martin Kallikak did what many a young man like him has done before and since and which unfortunately society has too often winked at as being the result of a natural instinct and bearing no serious results. It is quite possible that Martin Kallikak himself never gave any serious thought to his act, or if he did, it was merely to realize that in his youth he had been indiscreet and did that for which he was sorry, and being sorry he supposed his sin was atoned for, as he never suffered any really serious consequences from it. Even the people of his generation could not have begun to realize the evil that had been done. It is only after the lapse of six generations that we are able to see the havoc wrought by that one wrong act. Now that the facts are known, let the lesson be learned; let the sermon be preached; let it be impressed with all force upon our young men that they dare not step aside for one moment.

Some one may say, but the trouble was with the feeble-minded girl. If she had been taken care of, segregated or sterilized, all this would have been avoided, and this is true, so far as the problem concerned her, but to be effective now it must apply to all feeble-minded persons, male and female, before their propagation will cease. The instant we grasp this thought we come face to face with a problem that presents two great difficulties: The first is the difficulty of knowing who are the feeble-minded, and the second the difficulty of taking care of them when known.

A large proportion of these feeble-minded persons would not be recognized as such by the untrained observer. They are not idiots or imbeciles who plainly show in their countenances the extent of their mental defect. They are, as it was said before, the fools, the ne'er-dowells, the incompetents, the people whom the community has tolerated and helped to support, and oftentimes sent to our prisons and alms-

houses. These, we now find by the Binet tests, to be feeble-minded, so that the first difficulty in our problem may be solved with comparatively little trouble.

The second difficulty, the taking care of these people in such a way as to prevent their propagation, presents a tremendous task, and but two methods have been suggested, namely, segregation of their kind from the normal and the separation of the two sexes, and its alternative, sterilization of both the males and females.

Segregation would require, first, the stoppage and deportation of all mentally defective immigrants; indeed this should be done from now on under any circumstances. Second, the testing out by the Binet tests of all feeble-minded school children and their supervision in special training schools until adolescent age, when they would have to be kept in special institutions along with other noncriminal adults of their own sex, selected from the community as rapidly as possible.

Sterilization meant, until recent years, ovariectomy, or the removal of ovaries from the female, and castration in the male. To these there were very strong objections, as being mutilating operations that were repugnant to the sentiment and feeling of mankind in general. But surgeons recently have devised a method of sterilization that does not mutilate the body nor have any effect on the sex qualities of a man or a woman, but does take away the power of procreation only by rendering the man or woman sterile. The operation itself is almost as simple in males as having a tooth pulled, and is not much more serious in females. An objection to this resort might be the question as to what would be the social consequences of having our citizenship a group of people free to gratify their instincts without fear of the consequences in the shape of children. It may be answered, the feeble-minded seldom exercise restraint in any case.

If there be any plan or way to accomplish the weeding out of the feeble-minded less harsh or cumbersome or more effective than these suggested it has not been announced as yet. Several states at present have laws authorizing the asexualization or sterilization of certain persons, but restricted to a few inmates of various specified institutions. These laws should early be extended to include at least all the feeble-minded criminal class.

In closing, I want to say that the material, the ideas, and in perhaps too many instances, the language of this paper has been gathered from my reading, but I wish to acknowledge particular indebtedness to the article of Mr. Brewster and to various writings of Dr. Goddard of the Vineland Training School.

4201 Commercial Street.

PRESIDENTIAL ADDRESS*

G. WILSE ROBINSON, M.D.
KANSAS CITY

You have honored me by electing me to the position of chief executive officer of this society, which stands as the representative of organized and ethical medicine in Jackson County, Missouri. Of this honor, I am highly appreciative, and shall to the best of my ability preserve the glorious traditions of our society, serve you faithfully and promote the best interests of the medical profession in this community. It is my sincere wish that I may bring to this office as much ability, and honor it as greatly, as has my predecessor, Dr. George C. Mosher.

Custom has decreed that the president, at the time of assuming the duties of his office, shall detail his policies and state his aims; and craving your indulgence, I shall consume a few minutes of your time for this purpose.

In the first place, we should co-ordinate, as fully as possible, our activities with the state organization. Our program should be reported more fully in the State Journal. As the second largest county medical society within the state, we are entitled to, and should use, more space in the State Journal than we are using.

Our programs should be participated in to a greater degree by our own members. Many of our members have never addressed the society on any subject; many of them, since joining the society, have continued on the inactive list. This condition should not exist, and it is my desire that the program committee labor diligently in an effort to reduce the number of inactive members. I believe the attendance on our weekly meetings will be larger and the interest greater, if more clinical cases are presented and demonstrated.

It is my opinion that every program should be semiclinical. Every effort should be made by this organization to make Kansas City a center for the dissemination of medical knowledge throughout the Middle West, and I urge on all of our members an active support of the Medical and Surgical Club which has recently been organized for this purpose.

I also favor a closer relation between our county society and the societies of the nearby counties, and suggest that some reciprocal arrangement be made whereby our society can be represented on the programs of these societies, and they can have representation on our programs.

It is our duty, and should be our pleasure, to take a larger and more active interest in legislative matters; not only in such laws as pertain to public health, but in all legislation. We are

more than conservators of the health of the community, we are citizens of Kansas City, Jackson County, and the State of Missouri. We are interested in the laws that are enacted for the government of the whole people; in the execution of such laws that are on the statute books; and in the manner in which the money which is collected from us, in the form of taxes, is spent and so often misspent. Our interests are mutual, and we should not hesitate, as individuals and as an organization, to fight the crooked politician and the crooked legislation which he attempts to force on us. We should not hesitate to actively protect our own interests.

The principles of altruism are fine, but we carry it too far, and it has brought us the contempt of the professional politician, which we deserve. We must demonstrate our ability to protect our interests in any manner that the exigencies of the case require, or our interests will in no wise be respected by others.

Many healing cults, by the influence of money, aided and abetted by crooked politicians, are constantly encroaching on our position. The general public is not sufficiently discriminating to enable us to maintain our superior position by a policy of nonresistance.

It is a well-known fact that the courts have little respect for our claims against delinquent debtors; and we usually get "stung" when we invoke the aid of the courts in the collection of our accounts. The majority of us are too timid about our charges and collections. The physician, who charges a good fee for his services and insists on its payment, is more respected and his ability is rated much higher, than if he apologized for charging a small fee and neglects to enforce its collection. I do not believe that it is inconsistent with the high ideals of our profession for us to be business men as well. We certainly give enough of our time to the indigent poor, without being robbed by those who are able to pay. I am heartily in favor of this society having its own collecting agency—a collection agency modeled after the one which the physicians have established in the city of Detroit. I am informed that this agency has been of great service to the physicians, by stimulating a better business policy among them, and has saved them many thousands of dollars, which they otherwise would have lost through neglect. The venereal question is one which, like the poor, we have ever with us.

Syphilis is certainly increasing as a cause of mental and physical disability. It is our duty to see that this disease and gonorrhoea are reported and every effort made to check their spread; as they cost the community much more in money, health and life than smallpox, diph-

* Read before Jackson County Medical Society, Jan. 8, 1918.

theria, scarlet fever, measles and whooping cough combined.

It is useless for me to detail, to this intelligent body, the relations of alcoholism to public health; but knowing how much ill health is directly traceable to alcoholism, every physician should be an active, absolute prohibitionist.

Another problem that is going to confront us is the influence on the health of the present and future generations of the employment of women in doing work which has heretofore been done exclusively by men. Some of us have already been asked concerning the advisability, from the standpoint of health, of employing women as conductors on street cars. As these problems are presented to us, they must have our very careful and earnest consideration.

Feeble-mindedness is rapidly and dangerously on the increase, and nothing, or practically nothing, is being done by the state or municipality to control it. Provision should be made by the state to give institutional care, throughout life, to every feeble-minded person, in order that the propagation of their kind may be prevented. Such a policy would reduce our criminal class about 75 per cent.; reduce the number of prostitutes to an even greater extent, and to a considerable degree relieve society of the annoyance and unsocial acts of the hoboes, the I. W. W.'s and others of their kind.

Individually and collectively, we are interested in all questions pertaining to the cause and prevention of disease in the social, educational, political and living conditions of the whole people, and in the proper care and treatment of those who are ill.

But the supreme question which confronts us today, personally, and as a society, is the question of war. In the first place, what is going to be our personal relation? Many members of this society have come forward nobly and without hesitation, offering their services to their country. But what of those who have failed to respond? This war is drawing a very plain line of demarcation between the physicians of the country. In the first place: It is separating them into two general classes; namely, those who have responded, or will respond, and those who will not. The true physician does not hesitate to make sacrifices when duty calls; and it is quite true, no class of men will make so great sacrifice, financially and otherwise, as will the physicians who leave their business and enter the service of their country, in this, the hour of her greatest need. And the man who leaves a small practice to go is to be as heartily commended, and perhaps more so, as the man who leaves a large practice.

Those who don't go can be divided into several classes. Some are willing to go but have dependents who cannot spare them. Some have passed the age limit. Others have prohibitive physical disabilities. Many are kidding them-

selves with the idea that the community in which they reside needs them so badly that they cannot be spared; and some of this class have really talked themselves into believing that they can do much more good at home than they can in the army or navy; and perhaps they can for themselves. Others are going in, when they are convinced that they are really needed. Many are satisfied to stay at home and let those who are impelled by a stronger sense of duty and patriotism go and make the sacrifices, and do the work, which they really feel they should help to do. Selfishness is the prime motive which is keeping many from going in. And I regret to add, that there is a class of physicians who chuckle with glee at the thinning ranks of the profession and the departure of many of their competitors, and are ready, like vultures, to pounce on and glutton themselves with the business of the men who have gone. Such men are innocent of any thought of going, or of doing anything else which would interfere with their selfish and personal designs. And there is still another class, perhaps small in number, pro-German in sympathy, who will not go in, as it is their earnest hope that the kaiser will triumph against the country which has given them a home and furnishes them with food and raiment. If there be such among our membership, we should not hesitate to speedily expel them from our society.

It is my opinion that every eligible physician in the United States should volunteer his services, or should be taken into the service by draft. And it is my opinion that those who do not volunteer will be drafted. It is not fair or just that a few physicians make all the sacrifices, leaving the remainder at home to profit by the sacrifices of the few. If all are in, alternate services can be established, and all can have a part in the work.

This war will revolutionize our profession; out of the training and experience which men will receive, an army of specialists and experts will be developed. This is a time of testing for our profession; and it is my sincere wish that the Jackson County Medical Society will be found a hundred per cent. pure, and not 75, 50, 25, or even 10 per cent. alloy. The brains of our nation are being mobilized, and we must not be found in the "slacker" class. This is to the superlative degree a war of machinery, but it is to a greater degree a war of brains. The brain power of our nation is being measured and our nervous stability is being tested. We, as medical men, are greatly interested in what the answer will be. Of tremendous importance is the question, can we, as a people, adjust ourselves to the new and varied activities and experiences to which this war will subject us.

England has suffered from a maladjustment of many of her soldiers, as has all of the other warring nations. One-seventh of all of those

discharged from the English army for disabilities have been discharged because of war neuroses, of which shell-shock is the chief. Shell-shock and other neuroses result from an unstable nervous organization plus stress and strain, plus fear.

Momentous issues are at stake, and the solution of the difficulties depends on the answer given to one question: Can human energy be directed intelligently? We, as a profession, must do our part in answering the question; and in order that we may answer it intelligently and affirmatively we must have accurate information as to the structure and function of the machine we are trying to operate. If we expect to control temperament and character, we must not remain ignorant or indifferent in regard to the nature of the biological mechanisms regulating temperament and character. We must train ourselves to become capable of observing the behavior of living human beings, by recording the manner in which they respond to changes in environment. And when this information has been collected we must attempt to apply the principles of a practical regulation of conduct. It is true comparatively little is known of the laws governing human behavior, but we can add to the present stock of information.

The priest has told us what men should become; the poet has recorded his dream of an idealized race, and the historian has given us pictures of what men were supposed to have been; but man, as he actually is, has only recently become the subject of study.

The present catastrophe which threatens civilization is one of the tragic results of attempting to organize society in order to satisfy the critical conceptions without taking cognizance of the fundamental laws that govern human nature.

As previously stated, this war is a war of machines and of the brains of the men behind the machines. And the psychology of our men will be an important factor in determining victory or defeat. And we, as a profession, have a larger responsibility than merely caring for the sick and maimed; it is our duty to intelligently aid in the directing of the minds of our men, so that they may react to their new and untried environment, strongly and properly, and that their adjustment and behavior may be such that that very important thing called morale may be kept superlatively good, that they may be constantly exalted with the ideas of victory and not depressed by the thoughts of defeat.

Conclusion: Let us not forget that we are living in a progressive age and the motto of our profession should be progress, as the flaming truth of today forms the dead ashes of error of tomorrow.

935 Rialto Building.

MALTA FEVER, WITH REPORT OF CASE*

ROSS A. WOOLSEY, M.D.
ST. LOUIS

The thorough investigation of Malta fever by the British Army Medical Corps ranks well with our own investigation of yellow fever. Marston contributed the first paper of importance in 1861. Bruce discovered the specific organism of the disease, *micrococcus melitensis*, in 1887. Wright and Semple applied their method of serum diagnosis in 1897.

It was proven by these investigators that the disease was contracted from the goat, the laboratory work showing that the specific organism can be found in the blood, milk and urine. They have proven to their own satisfaction that the infected milk is responsible for Malta fever in man. Since thousands of soldiers have been invalidated to England, and no case has ever been known to occur in the hospitals among those in attendance, it is probable that very few cases arise from contact.

For many years American physicians considered it as endemic in the Mediterranean. The first case in the United States was reported by Craig of the U. S. Army in 1905, being a nurse in a Washington hospital who had attended nine United States soldiers infected with the disease in the Philippines; no other source known. The next case was reported by Ferenbaugh in Texas in 1911, following which the U. S. Army appointed Ferenbaugh and Gentry to investigate long continued fevers in that section, resulting in positive findings in a small number of cases. In 1913 Yount reported several cases in Arizona. The same year Wellman and Eustes reported one case in New Orleans, this case having been infected in Texas.

In those cases investigated by the United States Army the source of infection has been traced to the goat. About 20 per cent. of all goats examined gave a positive agglutination. In the goat-raising districts of Texas, New Mexico and Arizona, the Maltese is very common, being descended from those imported to this country from northern Africa.

The majority of cases of Malta fever were contracted during the spring season. This period embraces the kidding season and the time the goats are in full milk.

From the history of long-continued fevers in the goat-raising districts that simulate the cases of known Malta fever, one would conclude that the disease antedated its recognition in this country probably twenty or twenty-five years. With the exception of the case reported by Craig and the one reported by Wellman and

* Read at the meeting of the St. Louis Medical Society, Feb. 2, 1918.

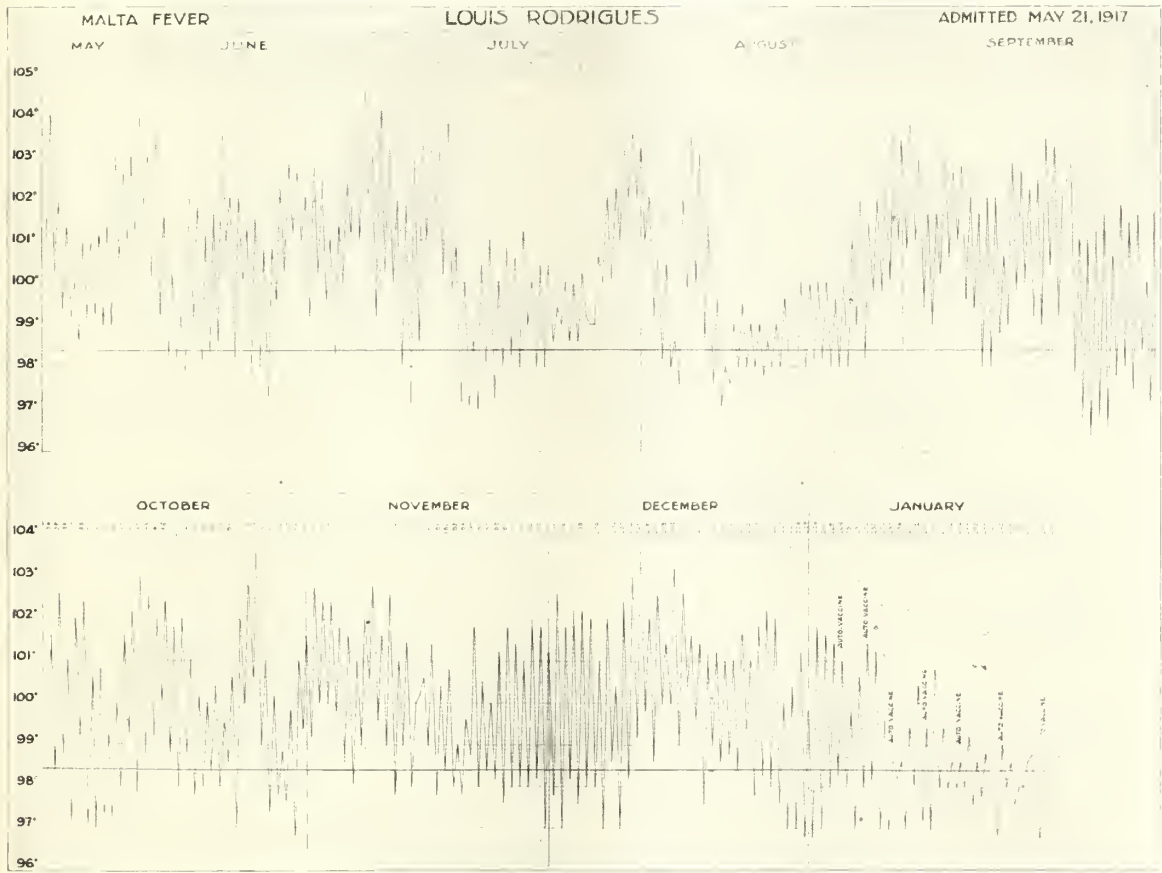
Eustes, the case considered in the following history is the only one, to my knowledge, reported outside of the goat-raising districts.

CASE REPORT

L. R., Mexican, aged 20, was admitted to the hospital May 21, 1917, giving the following history through an interpreter: Family and past history, negative. Six days previous to admission was taken sick with fever, pain and tenderness in abdomen, distension, and diarrhea. This was all the information that could be obtained. Physical examination on admission showed some distension and tenderness over the abdomen, with an increased peristalsis; no palpable spleen or liver; tongue coated; sordes on gums. Otherwise negative. Leukocyte count, 4,000. No plasmodium. No tubercle bacilli. Urine showed slight trace of albumen and a few granular casts; otherwise negative.

after two or three months. No bed sores. Very little constitutional disturbance. While there was considerable emaciation, it was probably due to limited diet.

After several months of continued fever, it became evident that the case was not one of typhoid. This led us to further investigation. Malta fever was suggested and our laboratory technician, Dr. M. Dwight Jennings, investigated the case bacteriologically. He was able to grow the micrococcus melitensis from both the blood and the urine. In order to prove this diagnosis, he procured a pure culture from the laboratories at Washington, D. C., with which he was able to get a positive agglutination with a dilution up to 1:2,560.



Fever chart.

This case was considered one of typhoid fever and was so treated. The patient being a Mexican and unable to speak English, about the only thing we had to go by was his temperature chart and physical findings. The tongue, gums and abdomen were typical of typhoid, for many weeks. Arthritis, orchitis and periosteal disturbances, with quite large nodules appearing on shins and forearms, attached to bone, and not movable. These nodules disappeared

At this time the Mexican was disposed to give us more useful information. We then elicited the following history:

The patient had lived at Zamora, Mexico, 200 miles west of Mexico City, until July, 1916, when he went to Colorado, working on a section just out of Denver for six months. During the 1916 holidays he returned to Zamora and lived with his mother for about three months, goat's milk being a regular article of diet. He, however, was not employed in the care of goats. He then returned to the United States, engaging as

extra gang laborer at Palestine, Texas, where he worked for twelve days, when he was taken sick with a gastro-intestinal disorder accompanied by nausea, cramps and purging—this being about twenty days after leaving home, making the incubation period over twenty days. He stayed in the bunk car for three or four days, and feeling better, drew his time and went to Fort Worth, where he remained for two days; then left with a Mexican extra gang for Dora, Ala., where he worked for six weeks, when he became entirely incapacitated and was sent to the hospital. He had been sick continuously since the original attack at Palestine but able to work. He entered the company hospital in the eighth week of his illness.

Since, in the treatment of this fever, there is no specific drug, medicine was not used. The local symptoms were treated on ordinary principles as they arose.

On December 2, although the temperature was ranging up to 102 and 103 in the afternoon, it was decided to allow the patient to get up, and move about, when it was found he had a multiple neuritis with accompanying foot drop as a result of the infection. His activities did not seem to influence the temperature, so on January 6 he was given his clothes and allowed to go to the convalescent ward.

The temperature curve did not seem to be especially influenced by time, so on January 4 we started an autogenous vaccine, given every fourth day the result of which will be seen on the temperature chart. In making this chart for purposes of demonstration the pulse rate was not considered of enough importance to be included, the ratio being about that of an ordinary typhoid. Although the temperature is normal at this time, after ten months of continuous fever, we will continue the autogenous vaccine for several weeks, hoping to prevent a relapse.

I wish to thank Dr. Jennings for his excellent assistance.

Laclede and Kingshighway.

DEMONSTRATION OF AN APPARATUS FOR MAKING FLUOROROENTGEN- OGRAPHY*

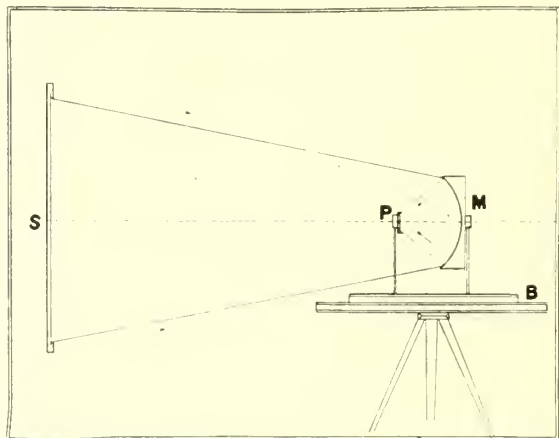
ANDRÉ G. DE WEAL
ST. LOUIS

One of the routine occurrences, I may even say a landmark, which distinguished a meeting of roentgenologists a few years ago, was a spirited discussion on the favorite topic of roentgenography versus roentgenoscopy—x-ray plate versus x-ray screen-image.

Each side had their pet arguments which would be more or less effectively used to silence the opposition. Those in favor of the universal

adoption of roentgenographic method would emphasize the lasting qualities and fine details of the photographic plate; the opponents were sure to advance the argument of the tremendous advantage found in the lifelike reproduction afforded by the fluoroscopic screen.

Today we find the two opinions reconciled, both methods being used, each one where it does most good. But the old objections to each of them are still present. The roentgenoscope *does* give us an opportunity to observe activity within the body, but its picture is only of very short duration and no permanent record can conveniently be kept of it. The x-ray plate on the other hand offers the disadvantage of being only the dead record of the condition present during the moment of exposure. More serious still, in taking the roentgenogram we are working blindly. We leave it largely to chance to obtain our picture at just the desired instant,



S, Fluoroscopic Screen; M, concave reflecting mirror; P, plate holder; B, optical bench.

and as an illustration I may call to your mind the complicated and expensive apparatus which were lately constructed in an effort to enable us to make a fluoroscopic examination almost simultaneously with the exposing of an x-ray plate. The apparatus I refer to is the pylorograph and the different tables constructed for similar purposes.

In an effort to remedy this condition I have constructed the apparatus of which I present to you tonight a preliminary report. Its principle is simple and consists of *photographing the fluoroscopic screen*. For this purpose a camera, that is, the use of a lens, has proven unsatisfactory and in its stead I employ the principle of the reflecting telescope, that is, a surface-silvered concave reflector, which collects all the light rays emanating from the screen and concentrates them into a focus. Within the focal point a suitable plate holder is inserted. The plate contained therein will be

* Given by invitation before St. Louis Medical Society, Jan. 26, 1918.

impressed by the light rays coming from the screen and after exposure can be developed in the usual manner. If preferred, the plate holder can be substituted by a surface-silvered plano mirror which in turn reflects the rays on our film or plate which then may be placed out of the path of the rays. It may be mentioned that *true* motion pictures of the screen may be produced in the same manner, but my experiments are not completed and I shall report on this particular aspect of this apparatus later on.

The advantages of this method are, summing up shortly, the following:

We can obtain in this manner a permanent and very accurate record of the fluoroscopic examination.

We can take a picture at the exact moment desired.

The picture obtained can be made in what-

ever size wished, and by making it small lends itself to be reprojected on a screen, and, on the other hand, can be very readily filed.

It has furthermore the great advantage of representing an outlay which is considerably below that in the usual method of taking pictures. I may mention that twenty or more pictures may be taken at the cost of the usual 14x17 x-ray plate.

I fully realize that in this preliminary report I have omitted a great many details, due partially to time limitation, partially also to the fact that in all likelihood the method employed shall undergo considerable modification before it may be regarded as practical and perfect.

A few pictures made by this method were shown to illustrate the scope of the apparatus in its present form.

1402 South Grand.

SOME OF THE WAR ACTIVITIES OF WASHINGTON UNIVERSITY MEDI- CAL SCHOOL

While we have announced from time to time such of the war activities of the medical schools of Missouri as came to our attention, we believe the following very complete account of the activities of Washington University Medical School will interest our readers. It was written by Dr. Ernest Sachs and published in the *Washington University Record* for March, 1918:

A large number of the medical school faculty who were unable to go to France with the base hospital were much distressed in the spring of 1917 at not having an active part in war work. In early summer we first learned that the Surgeon-General's Office proposed to put specialists into the various base hospitals and evacuation hospitals in France who should be particularly trained in abdominal surgery, surgery of the head, to include eye, ear, nose, throat and plastic surgery, as well as neurologic surgery, orthopedic surgery, genito-urinary surgery, etc. It soon became apparent that the number of specialists available in some of these branches was quite inadequate to man the number of hospitals that would be required.

One of our own faculty, Major Blair, was put in charge at Washington of that section of surgery of the head devoted to oral and plastic surgery.

In August a meeting was called in Washington to consider what was to be done about surgery of the nervous system. The supply of men in this line was totally inadequate, as at most one-half dozen men had specialized in this line. The committee had been told how many men were needed. They outlined an intensive course of study which was to be carried on synchronously in Philadelphia, Chicago, New York and St. Louis, for the intensive training of men in this line of work.

The St. Louis School of Neurological, Plastic and Oral Surgery was authorized by the Surgeon-General.

With Dr. Terry as dean and Dr. Hanau Loeb as chairman of the Curriculum Committee, the school started its first course on October 15 with headquarters at the Washington University Medical School. Practically all the instruction was done here, though some of the members of the faculty of the St. Louis University cooperated in the work. The course here was designed to train men who were to serve in evacuation hospitals, while the courses in the other cities were to train the men for the base hospitals. Consequently, the men here had to be trained in both oral and plastic surgery, as well as neurologic surgery, as one man has to take care of both types of cases at each evacuation hospital.

In each course there are twenty-five medical officers and nine dentists. The dentists are here only for a period of three weeks, since they are concerned only in the work about the mouth. The rest of the time is devoted to a study of brain and spinal cord conditions. At present the fourth class is being carried on.

In order to have illustrative material for the officers, the city administration has been very generous in permitting, during the period of the course, that the spinal and head injuries that ordinarily would be taken to the City Hospital be brought to the Barnes Hospital.

Another group of officers has more recently been sent here for an intensive course in genito-urinary diseases and syphilis. This course is being conducted by Drs. Caulk and Engman. Between twelve and fifteen men are students in this course and stay here for periods varying from four to six weeks.

With the reduced staff, due to the departure of so many men into military service, these added activities of the medical school have kept the staff exceedingly busy. The large number of medical men from all parts of the country that have been sent here for these courses will unquestionably be of great benefit to the medical school in the future, as they have, without exception, expressed great pleasure and satisfaction with its extraordinary equipment.

THE JOURNAL
OF THE
Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

MAY, 1918

EDITORIALS

JEFFERSON CITY MEETING

The Sixty-First Annual Meeting of the State Association will convene at Jefferson City, May 6, 7, 8. All sessions will be held in the House of Representatives at the new capitol which is one of the most beautiful structures of its kind in the country. A very interesting meeting will be the military session on Monday evening, May 6. On this occasion Governor Gardner will welcome the members to the capital city and undoubtedly tell us some interesting things about the war and the part the medical profession must take in this great conflict. Major Franklin Martin, Chairman of the General Medical Board, Council of National Defense, will be a guest and will tell us of the work of that body, and General Harvey C. Clark will describe some of the work accomplished by the military forces of Missouri. These speakers will be followed by an address of absorbing interest by Dr. G. Canby Robinson, acting dean of Washington University Medical School, on the care and reconstruction of the crippled soldiers after the war. Following this address Dr. John Young Brown, military aide to the Governor, will speak, and the program will be concluded with a series of motion pictures on the war by Major W. H. Luedde.

The House of Delegates will begin its session at 9:30 Monday morning, May 6, while the scientific sessions will start on Tuesday morning at 9 o'clock. The absence of a large number of our members who are ready contributors to the annual program was quickly felt by the program committee when it began to collect titles for the meeting, especially from members outside of the large cities, but there have been more papers offered than could be accommodated. The peculiar adjustment of train schedules in and out of Jefferson City—the principal passenger trains arriving and leaving about the middle of the day—practically compelled the committee to close the scientific work at noon of Wednesday, May 8.

The Central Hotel will be headquarters for the meeting and we suggest that members make

reservations of rooms in advance, stating the day of arrival and the rate they desire to pay for the room.

HOTELS AND RATES

(All European Plan)

New Central Hotel (Headquarters):

Rooms without bath, single.....\$1.00 and up
Rooms without bath, double.....\$2.00 and up
Rooms with bath, single.....\$2.00 and up
Rooms with bath, double.....\$3.00 and up

Monroe Hotel:

Rooms without bath, single.....\$0.50 and up
Rooms without bath, double.....\$1.00 and up
Rooms with bath, single.....\$1.50 and up
Rooms with bath, double.....\$2.50 and up

Madison Hotel:

\$1.00 to \$2.50.

SURGEON-GENERAL GORGAS MAKES
NEW APPEAL FOR MEDICAL
OFFICERS

In another column we publish a letter from Surgeon-General Gorgas appealing in the most urgent manner for more doctors to join the Medical Reserve Corps. "It is not now a question of a few hundred men volunteering for service," says General Gorgas, "but it is a question of the mobilization of the profession." He says the Department has almost reached the limit of medical officers available for assignment, and from other sources we learn that the number of doctors enlisting from day to day does not equal the number who are being assigned to active duty. With the new draft of 800,000 men soon to be mobilized and other drafts to follow, the need for medical officers becomes imperative.

Missouri physicians responded to the first call of the War Department with gratifying promptness and the full number requested has been provided. We feel sure that this new call will receive that response from Missouri doctors which the gravity of the occasion demands. We have passed the stage of doubt, the stage of hesitancy, the stage of "willingness to go if needed." We have reached the stage where all physicians must go who are physically capable of enduring the tremendous tasks which war surgery imposes on the medical officers. What answer will Missouri physicians give to the appeal of General Gorgas?

CALL FOR 5,000 DOCTORS MADE THROUGH THE AMERICAN MEDICAL ASSOCIATION, STATE AND COUNTY SOCIETIES

The Surgeon-General has recognized the tremendous resources of the organized medical profession for assisting him in enlisting the 5,000 medical officers he now needs in addition to those who have already joined the Medical Reserve Corps, and he has appealed to the American Medical Association and the state and county societies to bend all their energies toward accomplishing this task in the shortest possible time. This appeal from our highest medical officer will not be made in vain. Hitherto the organized medical profession has been aiding in the enlistment of medical officers to the best of its ability, though acting more or less blindly because we were never sure of the part it was desired that we should take in cooperating with the War Department. With the definite request from the Surgeon-General before us we can and we will give him the full force of our organized support with intelligent directness. The American Medical Association and the State Association will send to the county societies all information issued by the Surgeon-General concerning what he requires us to do so that the county societies can cooperate to their fullest extent.

We appeal to the county societies to give their earnest attention and vigorous support to every call that the Surgeon-General issues, and render patriotic service in assisting the Medical Department of the Army to mobilize the medical profession to the full strength required by the military forces.

CONSERVING THE INTERESTS OF MEMBERS IN ACTIVE SERVICE

Madison County Medical Society has solved the problem of caring for the practice of its members who are in active service in the war in a manner different from the plan recommended by the State Association, but which is apparently quite as satisfactory to the families of the absent members, which was to pay to the families of the absent physicians a certain percentage of the fees collected from the patients of those doctors. It was realized that such a plan presented certain difficulties which could, however, be overcome as best suited the conditions in the different counties. Madison County's plan is exceedingly simple and is very liberal for it involves assessing each member not in service a sum to provide an amount that will enable them to pay to the family of each member who has been ordered into active service the sum of \$75 monthly. This action was taken some time ago

and was the only instance of the kind that had come to our attention until recently when the announcement was made by the Jackson County Medical Society that the members in that county were providing for the families of their absent members in a somewhat similar though more restricted fashion. The Jackson County members are providing a fund which is called the "Comfort Fund" and is to be used in case of illness or other emergency for the benefit of the families of members in the Medical Officers Reserve Corps absent on active duty. The fund will be in charge of three members appointed by the president, and consists of two parts—a sinking fund, which is made up by initial contributions of a single sum, at the discretion of the donor, and a permanent fund which is provided for by monthly payments of a stipulated amount, each contributor giving to this fund a certain sum of his own choosing every month.

These instances of determination to care for the families of absent members of county medical societies by those who are prevented from going to the front indicate that the loved ones at home will not be permitted to suffer any privation or inconvenience. Other county societies may find similar and equally as satisfactory methods of fulfilling the spirit of the resolution adopted by the House of Delegates at the Springfield meeting in 1917.

THE CHICAGO SESSION OF THE AMERICAN MEDICAL ASSOCIATION JUNE 10-14

COMMITTEE ON ARRANGEMENTS

The Local Committee on Arrangements for the Annual Session of 1918, to be held in Chicago, June 10-14, is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association and their guests.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington Street, Chicago.

CLINICS

The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday and Saturday, June 6, 7 and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns from time to time.

ALUMNI AND SECTION DINNERS

Alumni and section dinners will be held on Wednesday evening from 6 to 8 o'clock so as not to conflict with other events which are

being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is cooperating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of the sections which desire to arrange for section dinners.

THE SCIENTIFIC EXHIBIT

The director of the Scientific Exhibit reports that many unusual and interesting exhibits are being arranged. He urges that others who may be in position to exhibit work demonstrating scientific investigation or specimens illustrating anatomic or pathologic conditions shall communicate with him. Applications for space in the Scientific Exhibit should be accompanied by a brief description and a statement of the object of the exhibit; the approximate space desired should also be stated. Application blanks and further details are to be obtained by addressing Dr. George H. Weaver, Director of Scientific Exhibit, 637 South Wood Street, Chicago.

SPECIAL ARRANGEMENTS FOR MEDICAL WOMEN

The medical women of Illinois are looking forward with pleasure to entertaining the women physicians of America. Dr. Clara P. Seippel has been appointed chairman of a subcommittee to have special supervision of this work. Subcommittees have been appointed to be of service to these visitors, not only during their stay, but before their arrival. Dr. Grace H. Campbell, chairman of the Committee on Hospitality, 25 East Washington Street, Chicago, will be pleased to assist women physicians who wish hotel reservations to obtain these so that women physicians may be lodged at one hotel. Downtown headquarters for the comfort and convenience of the women Fellows of the American Medical Association will be established in one of the women's clubs.

The subcommittee on entertainment of women physicians will be glad to hear from every medical woman who will be in Chicago during the week of the meeting and to be advised as soon as she knows definitely of the date and time of her arrival and her address while in the city so that the committee may plan some social gatherings.

HOTELS

A list of the hotels recommended by the Committee on Arrangements was published in the *Journal of the American Medical Association* March 30, with rates and locations. Members should write directly to hotels for

reservations, but if no satisfactory arrangement can be made in that manner the committee recommends that communications be addressed to Dr. C. J. Whalen, 25 East Washington Street, Chicago. The following hotels have been designated as general and section headquarters:

GENERAL HEADQUARTERS, HOTEL SHERMAN, North Clark and West Randolph.

PRACTICE OF MEDICINE: Hotel Morrison, 83 West Madison.

SURGERY, GENERAL AND ABDOMINAL: Auditorium Hotel, 430 South Michigan.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Congress Hotel, South Michigan and Congress.

OPHTHALMOLOGY: Hotel LaSalle, LaSalle and West Madison.

LARYNGOLOGY, OTOTOLOGY AND RHINOLOGY: Hotel LaSalle, LaSalle and West Madison.

DISEASES OF CHILDREN: Congress Hotel, South Michigan and Congress.

PHARMACOLOGY AND THERAPEUTICS: Auditorium Hotel, 430 South Michigan.

PATHOLOGY AND PHYSIOLOGY: Auditorium Hotel, 430 South Michigan.

STOMATOLOGY: Congress Hotel, South Michigan and Congress.

NERVOUS AND MENTAL DISEASES: Blackstone Hotel, South Michigan and East Seventh.

DERMATOLOGY: Blackstone Hotel, South Michigan and East Seventh.

PREVENTIVE MEDICINE AND PUBLIC HEALTH: Auditorium Hotel, 430 South Michigan.

GENITO-URINARY DISEASES: Auditorium Hotel, 430 South Michigan.

ORTHOPEDIC SURGERY: Congress Hotel, South Michigan and Congress.

GASTRO-ENTEROLOGY AND PROCTOLOGY: Auditorium Hotel, 430 South Michigan.

SCIENTIFIC EXHIBIT, REGISTRATION BUREAU, COMMERCIAL EXHIBIT, INFORMATION BUREAU, AND BRANCH POSTOFFICE: Hotel Sherman, North Clark and West Randolph.

DALLAS COUNTY MEDICAL SOCIETY ORGANIZED

On March 13 the Dallas County Medical Society was organized with seven charter members. Several other physicians will doubtless join the society but were prevented from attending the organization meeting. This leaves only seven counties in the state not affiliated with the State Association although there are a number of physicians in all these counties who are members of societies in adjoining counties. The organiza-

tion of Dallas County makes the 28th District, of which Dr. T. O. Klingnor is Councilor, fully organized, although it is the largest Councilor District in the state and comprises nine counties.

The meeting was held at Buffalo and was attended by the Councilor and the Secretary of the Association. The following physicians became charter members: M. J. Armstrong, Buffalo; V. H. Greenwood, Buffalo; F. A. Hudson, Buffalo; B. F. Johnson, Buffalo; Irvin Phillips, Buffalo; Robert Richey, Urbana; B. W. Vaughan, Urbana. The following officers were elected: President, B. W. Vaughan; vice-president, M. J. Armstrong; secretary-treasurer, F. A. Hudson; delegate, F. A. Hudson.

WEIGH YOUR CHILD FOR THE GOVERNMENT

The instructions for carrying out the weighing and measuring test of American children under 5 years of age were sent by the Child Welfare Department of the Women's Committee of the Council of National Defense to its state and local child-welfare chairmen who will be responsible for the test in each community. This test is the first feature of Children's Year which began on April 6. The plans for Children's Year prepared by the Children's Bureau of the U. S. Department of Labor include activities designed to protect all children from the special dangers of war time and to save the lives of 100,000 little children before April 6, 1919.

Many of the physical defects which caused the rejection of one-third of the men coming up for examination in the first draft are believed to date from some slight trouble neglected in early childhood. And the Children's Bureau emphasizes the fact that a higher standard of physical fitness in the rising generation can be assured only by greater attention to the physical condition of children.

According to the Bureau, height and weight and their relation to each other are a rough index of a young child's health and development. For instance, when a child is strikingly below the average weight for his height or is strikingly small for his age, it indicates that expert advice about diet and daily care is needed. Insofar as the test makes it plain to parents that the physical condition of their children needs special attention, and insofar as it leads to community provision for public health nurses and consultation centers for babies and young children, to a safeguarding of the milk supply, and to other measures for the protection of children, it will aid in conserving their health and in reaching the goal of 100,000 lives saved during Children's Year.

USE LESS SUGAR, ALCOHOL AND GLYCERINE

The United States Food Administration is making an appeal to physicians to conserve the available amount of sugar, alcohol and glycerine by writing fewer prescriptions of elixirs, syrups, fluid extracts and tinctures, and prescribing medicine more frequently in the form of infusions and decoctions and in solid form, such as capsules. The letter on this subject is published in another column and suggests ways and means of assisting the food administrator in accomplishing a great saving of the articles needed for war purposes.

NEW AND NONOFFICIAL REMEDIES

Under this caption we publish new articles that have been accepted by the Council on Pharmacy and Chemistry. We suggest that members write the advertisers for more complete information concerning the articles—not forgetting to state that your attention has been called to the article by this item in your JOURNAL. The following articles have been approved since our last issue and accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

TYPHOID VACCINE, PROPHYLACTIC.—A vaccine made from killed *Bacillus typhosus*. The vaccine is used for the prevention of typhoid fever, for which purpose typhoid vaccines are of recognized utility. Marketed in different sized containers, containing 500 million and 1,000 million killed *Bacillus typhosus* in 1 Cc. Eli Lilly & Co., Indianapolis.

TYPHOID VACCINE, THERAPEUTIC.—A vaccine made from killed *Bacillus typhosus*. The vaccine is proposed for the treatment of typhoid carriers and as a concomitant measure to the usual routine of typhoid therapy. Marketed in different sized containers, containing 100, 250, 500 and 1,000 million killed *Bacillus typhosus* in 1 Cc. Eli Lilly & Co., Indianapolis.

TYPHOID MIXED VACCINE (Typho-Bacterin Mixed).—A vaccine made from killed alpha and beta *Bacillus paratyphosus* and *Bacillus typhosus*. The vaccine is used for the immunization against typhoid and paratyphoid fevers and in the treatment of mixed infections of the typhoid bacillus and the paratyphoid bacilli. Marketed in different sized containers, containing 250 million alpha and beta *Bacillus paratyphosus* and 1,000 million *Bacillus typhosus* in 1 Cc., and 500 million alpha and beta *Bacillus paratyphosus* and 1,000 million *Bacillus typhosus* in 1 Cc. Eli Lilly & Co., Indianapolis.

BULGARIAN BACILLUS TABLETS—MULFORD.—Tablets containing a practically pure culture of *Bacillus bulgaricus*. Used in the prevention and treatment of conditions due to intestinal putrefaction. Marketed in vials containing fifty tablets. An expiration date is stamped on the label. H. K. Mulford Company, Philadelphia (*Jour. A. M. A.*, March 2, 1918, p. 623).

ARSENOBENZOL (DERMATOLOGIC RESEARCH LABORATORIES) 1 Gm. Ampules.—Each ampule contains 1 Gm. arsenobenzol (Dermatologic Research Laboratories),

a brand of arsphenamine complying with the New and Nonofficial Remedies standards. These ampules are prepared for use in hospitals in divided doses. Dermatological Research Laboratories, Philadelphia Polyclinic, Philadelphia.

HALAZONE-MONSANTO.—A brand of halazone complying with the New and Nonofficial Remedies standards. Halazone is parasulphonedichloramidobenzoic acid. The Monsanto Chemical Company, St. Louis, Mo.

PROCAINE-ABBOTT.—A brand of procaine complying with the New and Nonofficial Remedies standards. Procaine was first introduced as "novocaine." Chemically it is the monohydrochlorid of para-aminobenzoylethyl-amino-ethanol. It is used as a local anesthetic as a substitute for cocaine. The Abbott Laboratories (*Jour. A. M. A.*, March 16, 1918, p. 779).

OBITUARY

WILLIAM R. SIMPSON, M.D.

Dr. W. R. Simpson of Chillicothe, a graduate of the Washington University Medical School, 1871, died at his home on March 12, 1918, aged 76, from paralysis. Dr. Simpson was born in the town of Spring Hill, Livingston County, Missouri, and practiced in that community for thirteen years after his graduation. He then moved to Chillicothe, where he became one of the leaders in every movement for the improvement and welfare of the people, and at the time of his death was the president of the county board of health. For many years he was a member of the Livingston County Medical Society. In 1915 he retired from active practice.

HENRY L. PORTER, M.D.

At the meeting of the Newton County Medical Society held on March 5, resolutions on the death of Dr. H. L. Porter of Seneca were adopted. Dr. Porter died at St. Louis on November 16, 1917, and the notice of his loss appeared in these columns in our January issue. The resolutions follow:

WHEREAS, Death has taken from our midst our friend and colaborer, Dr. H. L. Porter, and

WHEREAS, We shall miss his pleasant companionship and his counsel, and

WHEREAS, The community has sustained an irreparable loss and his family have been bereft of a kind and gentle husband and father, therefore be it

Resolved, That we, the Newton County Medical Society, express our deepest regrets to his family and assure them of our boundless sympathy, and be it further

Resolved, That we spread these resolutions on our minutes, furnish a copy to the bereaved family, and also to our state journal for publication.

D. L. WEENS, M.D.

R. L. WILLS, M.D.

E. M. ROSEBERRY, M.D.

The Committee.

HORACE S. BOWERS, M.D.

Dr. Horace S. Bowers of Neosho, Mo., a graduate of the Kansas City Medical College, 1895, died at his home on February 23, 1918, aged 51. Dr. Bowers was born in Wilson County, Tennessee, but received his education in Newton County (Mo.) public schools, and in the Scarrit and Horner Institutes. After teaching school for a few years he took up the study of medicine and after receiving his medical degree he practiced his profession in Newton County. He was a member of the Newton County Medical Society, of which he was the secretary at the time of his death, and was highly esteemed, enjoying the confidence of his fellow physicians and a wide circle of friends. The following resolutions were adopted by the Newton County Medical Society on March 5:

WHEREAS, Death has taken our beloved brother and colleague, Dr. Horace S. Bowers, and

WHEREAS, We miss his counsels and pleasant companionship, and,

WHEREAS, The community has suffered a great loss and his family bereft of husband and father, therefore be it

Resolved, That we, the Newton County Medical Society, express the deepest sorrow to his family and assure them of our profoundest sympathy; and be it further

Resolved, That we spread these resolutions on the records of our society and convey a copy to the bereaved family, also to the JOURNAL of the state Medical association for publication.

D. L. WEENS, M.D.

R. L. WILLS, M.D.

E. M. ROSEBERRY, M.D.

The Committee.

DR. GEORGE HALLEY: IN MEMORIAM

Dr. George Halley was born in the Province of Ontario, Canada, September 10, 1839. His native place was a new country, where sturdiness and self reliance are developed. His early schooling was picked up in a country log school house where he spent from three to four months; the other months of the year being given to work. The higher education which Dr. Halley really appropriated to himself was by a combination of study and hard knocks. In 1865 he began the study of medicine and some time after entered Victoria University, Toronto Canada; afterwards he took a year's course, which was then about five months, in Long Island College Hospital, and then reentered Victoria University from which he received his degree in 1869. Shortly after he came to Kansas City which has since been his home and scene of activity. In less than a year he was assistant demonstrator of anatomy, then demonstrator, of the old Kansas City Medical College. In 1882 he became professor of surgery in the same school, and in 1891 he was called to the same chair in the University Med-

ical College which he held until the college closed its doors by reason of lack of funds. In 1884 he, together with the late Dr. Andrew S. Fulton, established the Kansas City Medical Record, which periodical was a friend and of great help to this society in publishing reports of papers read and their discussions. Dr. Halley leaves a widow, Mrs. Jessie Egelston Halley; a son, Dr. George E. Halley, of the Dental Reserve Corps, U. S. A.; Mrs. Georgia H. Evans, wife of Judge Andrew F. Evans, and Miss Eleanor Halley. It is not out of place to say right here that the fine mind qualities of Dr. Halley may be traced back centuries, for he was a descendant of Sir Edmund Halley, the noted astronomer of the seventeenth century, who gave the name to Halley's comet.

A letter to Dr. W. J. Frick from Dr. O'Neil, President Chicago Medical Society, says in part: "Had Dr. Halley in his palmy days occupied some of the amphitheatres, where the eyes of the world and the whole profession were on him, he would have had no rival, at least no superior." To this Dr. Frick, in part, says: "This tribute to Dr. Halley is so good and so true that I think you should see it. There are hundreds of us who say Amen to all in Dr. O'Neil's letter." Dr. Halley's standing in his profession was not only the highest, but he had the good will and friendship of his brother practitioners. The Jackson County Medical Society now expresses its sympathy and sorrow with those near and dear to him in their grief.

JOKSHAN FREYMAN,
H. B. COLEMAN,
R. E. CASTELAW,
Necrology Committee.

NEWS NOTES

DR. M. W. ROGERS of Princeton has been appointed city physician.

LIEUT. J. W. JOHNSON of Hayti, serving at Camp Pike, is at home with his wife, who is in bad health.

LIEUT. W. H. BREUER of St. Louis, councillor for the 26th district, now at Camp Lewis, Wash., has been promoted to be captain.

WASHINGTON University of St. Louis has decided to open the dental school to women students beginning with the academic year 1918-1919.

DR. J. H. KENNERLY, dean of the faculty of Washington University Dental School, was elected president of the Dental Faculties of the Association of American Universities, at its meeting at Pittsburgh, Pa.

LIEUT. G. W. PHIPPS of Caruthersville, on duty with the 110th Motor Supply Train at Fort Sill, spent a few days at home on furlough during March.

ANOTHER malpractice suit against one of our members was won by the physician on March 19. The jury returned a unanimous verdict in favor of the physician.

DR. O. L. SUGGETT has accepted a commission as First Lieutenant in the Medical Reserve Corps, and has been assigned to the urologic service at the base hospital at Chillicothe.

DR. DORA GREENE-WILSON of Kansas City was a guest of honor of the medical women of Chicago at the monthly dinner of the Woman's Medical Club of Chicago, March 31.

THE German Hospital of Kansas City has followed the lead of many other institutions in this country and eliminated the word German from its title. In the future it will be known as the Research Hospital.

MAJOR L. P. H. BAHRENBERG, Surgeon of the United States Public Health Service, Marine Hospital, St. Louis, has been elected medical director of the St. Louis Society for the Control and Prevention of Tuberculosis.

DR. E. F. ROBINSON of Kansas City has been appointed Chief Medical Officer and commissioned a major in the new Seventh Regiment of the National Guard of Missouri. General Harvey C. Clarke, commanding general of the military forces for the state of Missouri, made the appointment.

DR. HAYNIE ROWELL of Kearney, a member of Clay County Medical Society, who has served as a member of the school board of the county for the past twenty-one years, wants some one else to shoulder the responsibilities of this position, and therefore has announced that he will not be a candidate for re-election.

THE Jackson County Medical Society has offered its assistance to the Board of Public Welfare of Kansas City in an effort to eliminate the illegal sale of narcotics, and 300 druggists in Kansas City recently adopted resolutions to cooperate with the board in suppressing the unlawful traffic in these drugs.

DR. W. L. WYSONG of Missouri City has recovered from an attack of smallpox and it is said has been properly and satisfactorily fumigated. The doctor seemed to be determined that his people should be protected and evidently forgot to vaccinate himself, so when the germs came along he took the disease. His was the only case in the community.

The Physicians Supply Company of Kansas City suffered a severe loss by fire several months ago, but immediately established temporary quarters at 10th and McGee Streets. They have now leased quarters in the Lathrop Building on Grand Avenue, where they will be permanently located after May 15 with a new stock of surgical and hospital supplies and sick room specialties.

DR. GEO. H. PIPKIN, formerly superintendent of the General Hospital of Kansas City and for a short period Health Commissioner, has returned to Kansas City after a period of rest and recuperation in New Mexico. About a year ago Dr. Pipkin's physical condition showed signs of serious disturbance which compelled him to seek a more equable climate. He is reported to be in good health now.

THE U. S. Public Health Service is greatly in need of the services of competent sanitarians, particularly medical officers, sanitary engineers and scientific assistants. Salaries vary from \$1,800 to \$2,500 per annum. Applicants should address the Surgeon-General, United States Public Health Service, Washington, D. C., stating in full experience and training which they have had.

DR. E. H. TROWBRIDGE, in charge of medical inspection of schoolchildren at Kansas City, has recommended that the Board of Education supply glasses for schoolchildren with defective eyesight. Computing the cost to the city by the retardation of children with faulty vision, Dr. Trowbridge showed that the financial loss in the case of six pupils was \$264, based on the average cost of each school child at \$44 per year.

PLANS are being drawn for a four story and basement addition to the Missouri Baptist Sanitarium at St. Louis, to cost about \$110,000, construction to commence on April 15. The addition will be of strictly modern and fire-proof construction, conforming in general architecture and finish to the new building that was erected by the sanitarium about four years ago at a cost of \$200,000. The addition to be erected this year will contain 100 rooms for patients, a new kitchen, service room, nurses' dining room and other accommodations for employees.

REPORTS of casualties among our troops in the war mention Lieut. J. F. Hardesty among the missing. This probably refers to Dr. John F. Hardesty, a member of the St. Louis Medical Society, who enlisted in the Medical Reserve Corps in the summer of 1917. Another report speaks of the death from wounds of Lieut. F. V. Frazier of the medical corps in France,

and doubtless refers to Dr. Francis V. Frazier of Altamont, Mo. Dr. Frazier was a member of the Daviess County Medical Society and enlisted in the Medical Reserve Corps last summer. As soon as we learn definitely concerning the accuracy of these reports we will publish further information.

THERE is need for about 100 women bacteriologists to take the place of men in the cantonment laboratories, the Surgeon-General's Office of the United States Army announces. The service of the men is demanded for the hospital units which are going abroad and their places at the home cantonments are to be filled by women. Applications are arriving from all the camps, some asking for as many as nine women. A good practical knowledge of clinical pathology and diagnostic bacteriology is required for the work. The present salary is \$720 with maintenance and \$1,200 without, with transportation furnished by the Government. Applications may be made to Office of the Surgeon-General, Washington, D. C.

DURING March the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies: Calco Chemical Company, Chlorcosane (Calco); Gilliland Laboratories, Normal Horse Serum, Concentrated and Refined Diphtheria Antitoxin, Concentrated and Refined Tetanus Antitoxin, Typhoid Vaccine, Smallpox Vaccine, Original Tuberculin, "O. T.," Tuberculin Ointment in Capsules (for the Moro percutaneous diagnostic test), Bouillon Filtrate Tuberculin, "B. F.," Bouillon Emulsion Tuberculin, "B. E.," Tuberculin Residue, "T. R.," Tuberculin for the Detre differential diagnostic test; Monsanto Chemical Works, Dichloramine-T.

DR. WM. J. ROBINSON of New York has for some years been quite a picturesque figure in medical literature. As editor of the *Critic and Guide* he probably became better known to the profession than any other medical editor of the second magnitude. We learn from the New York Times that he was arrested on March 4 for violation of the espionage act and put under a bond of \$5,000 to appear before the United States Commissioner for trial. Brilliant and fearless, with ready speech and facile pen, but entirely lacking in balance and profundity, it is no matter of surprise to his acquaintances that he has become at length seriously involved in a grave charge. His culminating utterance was a letter to President Wilson charging him with securing his election by false pretenses and demanding that our forces be at once recalled from France since Germany is "victorious and invincible."—*Vermont Medicine*.

AUDRAIN COUNTY has voted authority to issue bonds to the amount of \$75,000 for the erection of a general hospital to be located in Mexico. This is the first county in the state to take the advantage of the law passed at the last session of the legislature authorizing any county to establish and maintain a public hospital by levying a tax and issuing bonds therefor. The members of Audrain County Medical Society were very active in helping to carry the election. A training school for nurses will be established in connection with the new hospital to be erected. Mexico Hospital which has been operating for the past four years will turn over its equipment, estimated to be worth about \$6,000, to the county for use in the new hospital. The success of the Mexico Hospital, which was supported by private subscriptions, was so conspicuous that it served as a stimulus for the passage of the law to issue bonds, the vote being about nine to one in favor of the proposition.

MEMBERSHIP CHANGES, APRIL

NEW MEMBERS

John Nelson Barnes, St. Louis.
 Wm. A. Beckemeyer, Sedalia.
 Adelheid C. Bedal, St. Louis.
 Walter J. Cluthe, Kansas City
 Carl L. Conrad, Pleasant Hill.
 John O'F. Farrar, St. Louis.
 Ronold Gzell, St. Louis.
 G. Leonard Harrington, Independence.
 R. Graham Hereford, Ashley.
 Christ I. Karabasneff, St. Louis.
 Gilbert A. Leslie, Olean.
 Walter O. Loescher, St. Louis.
 G. C. Lyttle, St. Louis.
 Alonzo H. Mackey, Gorin.
 Pleasant M. Malcolm, Sikeston.
 Elmer L. Ruble, Kansas City.
 Geo. H. Shirley, Bagnell.
 John Lester Sims, Jr., Joplin.
 J. W. Trisler, Morley.
 Ellsworth H. Trowbridge, Kansas City.
 Franklin G. Weary, St. Joseph.
 Roger W. Webster, Carthage.
 James Bart Williams, Joplin.

CHANGES OF ADDRESSES

F. W. Abeken, 3531 South Broadway to 914 Utah Pl., St. Louis.
 G. W. Berry, Montrose to Butler.
 Thos. S. Bishop, Phoenix to Scottsdale Stage, Ariz.
 J. W. Burgess, Greenwood to Leeton.
 A. T. Chatham, Kennet to Clarkton.

O. T. Cohen, Malden to Marquand.
 A. L. Davis, Arbela to Memphis.
 Frank P. Dunn, Villa Ridge to Valley Park.
 C. C. English, Mt. Vernon, Mo., to Booneville, Ark.
 Wm. T. Eudy, Koller to Birch Tree.
 Ellis Fischel, 82 Aberdeen Pl. to 400 Metropolitan Bldg., St. Louis.
 Jacob Friedman, 512 Carleton Bldg. to Berlin and Euclid Ave., St. Louis.
 Julius H. Gross, 306 Oriel Bldg. to 500 Carleton Bldg., St. Louis.
 J. D. Hayward, 5796 McPherson Ave. to 5905 Etzel, St. Louis.
 Harold B. Hedrick, 824 Rialto Bldg. to 520 Chambers Bldg., Kansas City.
 Geo. H. Hoxie, 1334 Rialto Bldg. to 3719 Penn Ave., Kansas City.
 Max W. Jacobs, 5075 Cabanne Ave. to 5896 Cates Ave., St. Louis.
 Meredith R. Johnston, 500 S. Kingshighway to 470 Lake Ave., St. Louis.
 M. J. Lonsway, 1259 N. Kingshighway to 500 S. Kingshighway, St. Louis.
 H. L. Lowry, Tindall to Trenton.
 Paul M. Rothman, 1007A Cass Ave. to 1008 Cass Ave., St. Louis.
 Phil H. Scherer, 229 Frisco Bldg. to 1701A S. Broadway, St. Louis.
 Clarence Smith, Liberal, Mo., to Gallup, N. Mex.
 Samuel T. Smith, Moffat, Colo., to Poplar Bluff, Mo.
 Lewis C. Snell, Ritchey, Mo., to Kansas City, Kan.
 B. E. Stockwell, 2345 S. Broadway to 5081 Cates Ave., St. Louis.
 C. H. Suddarth, Smithville to Excelsior Springs.
 A. R. Timmerman, Commerce Bldg. to Georgetown Bldg., St. Joseph.
 R. M. Winn, Hannibal, Mo., to Griggsville, Ill.
 D. L. Wood, 1116 Main St. to 813 Walnut St., Kansas City.
 Paul V. Wooley, 501 Sharp Bldg. to 4146 Charlotte St., Kansas City.

WITHDREW

L. F. Biesemeyer, Chamois.
 O. P. Farrington, Thayer, Kan.

DECEASED

J. H. H. Reser, Conway.
 E. J. Thurman, St. Louis.

CORRESPONDENCE

REPORTS DESIRED ON ARSPHENAMINE AND NEOARSPHENAMINE

A letter from the director of the Hygienic Laboratory of the United States Public Health Service appeals to physicians to send reports to the laboratory of untoward results from the use of arsphenamine and neoarsphenamine. Members are urged to comply with this request and refer any instances of the kind mentioned in the letter which follows:

WASHINGTON, April 5, 1918.

To the Editor:

In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamine, I have to request that you give publicity to the statement that it is requested that samples of any lots of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples it should be ascertained that the lot number is the same as that of the ampoules used on patients. The samples sent should, if possible, be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and result; that is, whether fatal or not.

G. W. McCoy,
Director Hygienic Laboratory.

LESS ALCOHOL, GLYCERIN AND SUGAR IN PRESCRIPTIONS

WASHINGTON, D. C., March 19, 1918.

To the Editor:

As you are aware there is urgent need for the country to use with the utmost care, our stocks of sugar, alcohol and glycerin. It has come to our attention through the work of Professor Wimmer of New York and Mr. F. A. Upsher Smith of St. Paul, Minn., that it is possible to reduce largely the amount of these materials used in medicines by the adoption of infusions, decoctions and solid forms of medication, such as capsules, in place of elixirs, syrups, fluid extracts and tinctures.

As the choice of medicine rests with the physician we feel that the extent to which this conservation program is successful rests largely with the physician and we urge on physicians throughout the country the desirability of prescribing extemporaneously wherever possible.

It is really desirable that the editors of pharmaceutical and medical journals, deans and professors of colleges, and secretaries of state,

county and city associations should see that the matter is fully discussed at meetings of physicians and druggists and should do all within their power to assist this conservation movement, which cannot fail to be of material assistance to the country since "Food Will Win the War."

May we depend on you for your active cooperation in this matter?

Yours very truly,

UNITED STATES FOOD ADMINISTRATION,
Per Charles W. Merrill, Division of Chemicals,
Sisal and Jute.

SUPREME DEMAND FOR MEDICAL OFFICERS

WAR DEPARTMENT,
OFFICE OF THE SURGEON-GENERAL,
WASHINGTON, April 8, 1918.

Editor, Jour. Mo. State Med. Assn., St. Louis:

1. I wish to call to the attention of the profession at large the urgent need of additional medical officers. As the war progresses the need for additional officers becomes each day more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

2. I am, therefore, appealing to you to bring to the attention of the profession at large the necessity for additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands on the resources of the country. The conservation of these resources, especially that of man-power, depends entirely on an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men will be in France. Fifteen thousand medical officers will be required for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

3. Within the next two or three months the second draft will be made, to be followed by other drafts, each of which will require its proportionate number of medical officers. There are at this time on the available list of the Reserve Corps, an insufficient number of officers to meet the demands of this draft.

4. I cannot emphasize too strongly the supreme demand for medical officers. Will you give the Department your assistance in obtaining these officers? It is not now a question of

a few hundred medical men volunteering for service, but it is a question of the mobilization of the profession. In the large centers of population and at other convenient points as well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

5. The requirements for commission in the Medical Reserve Corps are that the applicant be a male citizen of the United States, a graduate of a reputable school of medicine authorized to confer the degree of M.D., between the ages of 22 and 55 years, and professionally, morally and physically qualified for service.

6. With deep appreciation of any service you may be able to render the Department, I am

W. C. GORGAS,
Surgeon-General, U. S. Army.

"THE UPRIGHT POSTURE"

Commenting on Dr. Pohlman's article under the above caption which appeared in the March number of *THE JOURNAL*, page 80, I desire to say that years ago a wag asked me, "Why God placed the eyes of a chicken on the side of his head, instead of in front," and, of course, I could not answer. The solution of the problem, as analyzed by the wag, was this: "God made eyes to see with." So we assume that the side of the head was the best place for a chicken's eyes. Now, a chick's head is quite movable and he does not have to turn around to see behind him, nor does the upright position seem to interfere with the health or longevity of the bird family—and we suspect that every creature is in its normal realm, whether it be a bird, a snake, a fish or an ox. There is not much change noted in the history of oxen—and the history of man, so far as given, is that he walked on his feet and did all kinds of deviltry with his hands, even to writing articles to prove that his grandparents were apes. Just why a man will spend years and years trying to show that he, himself, could make vast improvements on what he is, I really cannot say—but I guess that the man who thinks that it is better to walk on his "all-fours" than on his feet, should be allowed to do so, and that, if he persists in being a monkey, he should be sent to a place suited to his race. Individually I prefer to be called a "man," and would rather think myself a degenerate than to believe that my ancestor was a "monkey." Go to, Brother Pohlman, and leave "creation" remain as it is!

Respectfully submitted,

W. P. HOWLE.
Charleston, Mo., March 20, 1918.

MISCELLANY

GOVERNMENT TESTS SERUMS AND VACCINES

In order that there may be no doubt of the effectiveness of the serums and vaccines most in use both in the military forces and in civil life, the United States Public Health Service is now making tests of samples from every lot of these products made by the various manufacturers. The tests are made at the hygienic laboratory in this city before the products are placed on the market for sale in interstate traffic. As rapidly as possible the Public Health Service has been determining on standards for the different serums and vaccines used in preventing disease, and where sufficiently accurate standards could be found it has held the manufacturers up to them. Tests for reliability are now made in the case of serums and vaccines used in pneumonia, meningitis, smallpox, typhoid fever, diphtheria, and tetanus.

Since 1902 the Public Health Service has had supervision by law over the manufacture of viruses, serums, and toxins to be sold in interstate traffic. At the present time a large number of firms are licensed for the manufacture of these products. This means that their establishments are satisfactory from a sanitary point of view and that their products are free from contamination.

In the case of the serums used in the six diseases mentioned it means, moreover, that the products, as made, have been found capable of preventing the diseases they are to be used against.

MUNYON—HARTMAN—AYER

Three successful careers, or rather three careers which business esteems successful, came to a close within the past month when death claimed S. B. Hartman, James M. Munyon and Frederick Ayer, all of them manufacturers of widely known patent medicines.

Anent these deaths, the *Evening Post* of this city makes the following interesting observations on patent medicines:

PATENT MEDICINES

"Death has lately claimed two Americans whose works or whose name and physical presentment were intimately familiar to unnumbered millions of their countrymen. About a fortnight ago there passed away at Columbus one S. B. Hartman. He gave Peruna to civilization. On Sunday there died at Palm Beach one James M. Munyon, whose uplifted index finger had for its only rival in popularity the somewhat similar gesture of the Statute of Liberty in New York Harbor. It is not recorded that either of these men died of a broken heart, or that an autopsy would have revealed, inscribed on that organ, the words 'Pure Food Law.' Yet there is a certain tragic coincidence in the fact that the disappearance of these two men should have come at a time when prohibition is swarming over the top for the final charge. It is the climax of a campaign which began with the capture of the first-line trenches several years ago, when Peruna and its allies, the various Bitters, Malt Whiskies, Wines of Life and Reinforced Sarsaparillas were thrown definitely on the defensive or altogether swept out of existence. Another year or two and most of these giants of the advertising columns will be forgotten. Their fame was writ in equal parts of water and alcohol.

"Acute observers of American civilization, both

foreign and domestic, used to dwell on the lust for patent medicines as an outstanding national trait. More properly it should be called an Anglo-Saxon trait. The most superficial study of English railway stations and London busses will demonstrate that passion for paper-wrapped tonics must have been brought over from England together with the language of Shakespeare and the principles of Magna Charta. It is still difficult for the foreign traveler, longing for his first glimpse of Magdalen Tower and the Bodleian, to determine whether he has really got off at Oxford or at a place called Horsley's Health Drops. Visitors bound for the Bank of England have let many an omnibus pass by under the impression that the latter were bound for Bovril or Eno's. The great classic of patent medicines has been written by an Englishman, H. G. Wells, in 'Tono-Bungay,' incidentally the most humanly appealing of all the Wellsian books. An Anglo-Saxon trait, undoubtedly, with this conspicuous differentiation perhaps, that England has a preference for pills, while we concentrated on brown bottles. It is easy to imagine how the historical investigator of American social phenomena between 1870 and 1910, by applying the methods of the professional archaeologist in the Ægean and the valleys of the Nile and the Euphrates, will reconstruct out of our advertising columns an entire American mythology. Munyon the Health-giver for Apollo, Father Duffy for Æsculapius, Old Father John for Cheiron, Lydia Pinkham for Ceres the Nourishing Mother—these require no abrupt leap of the imagination. They all have about the same relation to reality and to the human will to believe.

"Today the bleak winds are howling across the fast-emptying seats of the patent Olympians. We cannot escape a sense of poignant regret which attaches to all Götterdämmerungs. Like the art of the Greeks which sank with the disappearance of the bright gods, our own landscape art is bound to suffer. The Jersey meadows and the immemorial rocks along the route of the New York Central no longer blossom with the forms and visages of these demiurgic preservers and restorers of Life, Youth, Beauty, Hope, of these slayers of the dragons of rheumatisms, asthma, sick headache, and that mysterious pain in the back when you get up in the morning. Their place is taken by a sordid civilization of patent fly screens and piano players. Yet, to quote a Königsberg philosopher recently favored by Imperial approval, this is but the shifting play of appearance. The reality remains. The passion for magic remedies is probably as strong in the heart of America today as it ever was in the days when innocent clergymen wondered why Peruna, after the preliminary 'kick,' left them with a greater discontent than ever. The difference is only that the patent remedy has passed from the physical realm into spiritual realm. The point of attack is no longer those neuralgic pains in the back, that tired feeling in the morning, but the feebleness of will, the lack of concentration, the absence of ambition, the inability to tap one's hidden reservoirs of soul energy to which a whole advertising literature addresses itself today.

"Consider, for example, the correspondence courses in Concentration which are being offered to the American public in such profusion at a ridiculous monthly sum in view of the \$10,000 salary which is almost certain to follow. Consider the various book-shelves through which diffident farmer boys may become leaders of men, stutterers may learn to sway audiences with the magic spell of their words, and homely girls may master the secret of Charm which wins the admiration of men in faultless Rochester-made evening clothes. Consider the entire national philosophy of curing by regular doses, which expresses itself in Clean-up Weeks, Baby Weeks, Love-your-Mother Weeks, and Remember-your-Grandfather Weeks. It

is the old Hartman, Pinkham, and Father John instinct at work. There is no essential difference between Dr. Munyon's uplifted finger and the finger of the young man pointed directly at you and commanding you to concentrate for Success for three dollars down and a dollar a month. It is a comforting thought that the hale American constitution which did not break down under Peruna will survive these magic spiritual potions."—*Weekly Bull. New York City Health Dept.*

HOSPITALS DESIGNATED FOR RECONSTRUCTION OF DISABLED AMERICAN SOLDIERS

The Surgeon-General of the Army authorizes the following:

The Chief of Staff has approved additional recommendations for the reconstruction of disabled American soldiers. The following hospitals will be used in beginning the work of physical reconstruction:

General Hospital No. 2, Fort McHenry, Md.; General Hospital No. 3, Colonia, N. J.; General Hospital No. 4, Fort Porter, N. Y.; General Hospital No. 6, Fort McPherson, Ga.; General Hospital No. 7, Roland Park, Baltimore, Md.; General Hospital No. 9, Lakewood, N. J.; General Hospital No. 13, Dansville, N. Y.; General Hospital No. 14, Fort Oglethorpe, Ga.; Army and Navy General Hospital, Hot Springs, Ark.; Walter Reed General Hospital, Takoma Park, Washington, D. C.; Letterman General Hospital, San Francisco; Base Hospital at Fort Des Moines, Iowa; Base Hospital at Fort Riley, Kan., and Base Hospital at Fort Sam Houston, Tex.

OTHERS TO BE ADDED

From time to time other hospitals for reconstruction work will be added to this list. Individual hospitals from this group and from those subsequently added to it will be equipped and staffed, either throughout or as to one or more wards, for special work in cardiovascular diseases; tuberculosis, neurological and other head surgery cases, orthopedics; amputations; insane cases; war neurosis (and other neurological cases); blind, deaf, and speech-defect cases; general medicine; general surgery; and other specialties to be added.

To which hospitals in the foregoing list cases in each of these specialties will be assigned has not been determined except that insane cases will be cared for at General Hospital No. 4, Fort Porter, N. Y.; blind and deaf at General Hospital No. 7, Roland Park, Baltimore; epileptics and neurotics at General Hospital No. 13, Dansville, N. Y.; and special provisions made for amputation work at Walter Reed and Letterman Hospitals.

STATEMENT OF POLICY

In addition to the provisions of staff and equipment for the treatment of physical disabilities, there will be provisions at each hospital, in accord with the best known practice for functional restoration and mental rehabilitation. The following is the statement of policy recommended by the Surgeon-General:

"That hereafter no member of the military service disabled in line of duty, even though not expected to return to duty, will be discharged from service until he has attained complete recovery or as complete recovery as it is to be expected that he will attain when the nature of his disability is considered. The inauguration of this continued treatment will result, during the period of the war, in saving to the

service of a large number of efficient officers and soldiers who without it would never become able to perform duty.

"Physical reconstruction may be defined as the completest form of medical and surgical treatment carried to the point where maximum functional restoration, mental and physical, has been secured. To secure this result the use of work, mental and manual, will be required during the convalescent period. This therapeutic measure, in addition to aiding greatly in shortening the convalescent period, retains or arouses mental activities, preventing 'hospitalization,' and enables the patient to be returned to service or civil life with the full realization that he can work in his handicapped state, and with habits of industry much encouraged if not firmly formed."

SPECIAL "EDUCATIONAL" OFFICER

At each hospital where reconstruction work is carried on there will be a special "educational" officer, whose functions are thus indicated in the approved recommendations:

"The duties of this officer are to arrange for and supervise, under the direction of the commanding officer of the hospital, the means provided for the use of therapeutic work, such as curative workshops, classes, etc.; to act as technical advisor to the commanding officer on this subject; to recommend the development of necessary means to keep patients employed so far as it is possible to do so; to make the necessary records of work done in his department; and to have immediate charge of any special training of vocational nature which can be given with the means at hand.

"These officers are to be obtained from the ranks of teachers, vocational instructors, and others especially qualified, and will be selected for their training, experience and peculiar fitness for the work. Where it is possible to get a man who is himself handicapped by some physical disability and who has made a success in life it is expected to do so."

As a result of a survey made by the Surgeon-General's Office of men already undergoing reconstruction treatment in this country, it is expected that enlisted men who have completed their treatment and retraining, but who are unfitted for further field service, will be found worthy of commissions and well fitted for the work outlined in the two preceding paragraphs. No increase in the number of enlisted men in the Medical Department is anticipated for this work, the expectation being that patients, or former patients, will be used.

"RECONSTRUCTION AIDES"

"Reconstruction aides," consisting of women trained in special features of reconstruction work, and enlisted men, are being provided. There are two classes of these: The first are teachers of simple occupations to men who must remain in bed or in wheel chairs for long periods, but who are not acutely ill and whose minds are active; the other class are especially trained in massage work. In this connection the approved recommendations say:

"By the employment of educational officers and reconstruction aides it is expected to develop to the highest point the therapeutic work and it is expected not only to hasten the recovery of the patients but that an environment will be created in military hospitals, which while in no way relaxing the necessary discipline, will greatly promote contentment and make the atmosphere of these hospitals such that the time spent in convalescence will pass most pleasantly because the minds and hands of the patients are properly occupied in profitable pursuits."

MEETING OF GENERAL MEDICAL BOARD OF COUNCIL OF NATIONAL DEFENSE

HELD IN CONNECTION WITH DEDICATION OF WARDEN
MCLEAN AUDITORIUM AT CAMP GREENLEAF,
CHICKAMAUGA, PARK, GA.

Dedication of the Warden McLean Auditorium at Camp Greenleaf, the military medical school at Camp Chickamauga, Ga., on March 11 was made notable not only because of the presence of the Surgeon-General of the Army and members of his staff, as well as many distinguished medical men from military and civil life, but also because of the regular meeting there March 10 of the General Medical Board of the Council of National Defense, usually held in Washington. About 1,000 doctors, who as Medical Reserve Officers are taking the three months' course, accepted the invitation to attend, extended by Dr. Franklin Martin, member of the Advisory Commission of the council and chairman of the board.

These members of the General Medical Board attended: Dr. Franklin Martin, chairman; Dr. William F. Snow, secretary; Surgeon-General William C. Gorgas, Dr. Victor C. Vaughan, Dr. William H. Welch, Dr. John Young Brown, Dr. John G. Clark, Dr. Thomas S. Cullen, Dr. Edward P. Davis, Dr. William D. Haggard, Dr. Jabez Jackson, Dr. Edward Martin, Dr. Charles H. Mayo, Dr. Stuart McGuire, Dr. John D. McLean, Dr. Hubert A. Royster.

Introduced by Dr. Martin, Surgeon-General Gorgas said he knew of no more important work than the activities being developed at Camp Greenleaf; that the necessity of military medical training is obvious; also that on a visit to England five years ago he learned that the great developments in the English system had been forced by the necessities arising during the Boer War; so, he said, the United States military medical service is being developed by the exigencies now confronting us and would continue after the war. He said he gained from the British service ideas of value for his administration.

Dr. William H. Welch read a statement giving illuminating figures as to the status in the Army and Navy. Men enrolled in the Medical Officers Reserve Corps, and recommended to the Adjutant-General's office totaled 21,824, of whom 17,313 have accepted their commissions. Of 5,378 recommended in the Dental Reserve Corps, 5,086 have accepted. Of 1,067 recommended in the Sanitary Corps, 865 have accepted. Of 152 recommended in the Ambulance Service, 138 have accepted. There are 844 officers in the Naval Medical Corps and 103 in the Naval Dental Corps. There are 827 medical and 199 dental officers enrolled in the Naval Reserve Force. There are available in the Naval Medical Reserve Corps, retired officers, acting assistant surgeons and national naval volunteers, naval militia and coast guard, 284 men. Total of officers available for active naval service are 2,257. There are 207 chief pharmacists and pharmacists, 7,000 hospital corpsmen in the regular service and 1,000 in the reserve, making a total available for active service in these branches of 8,207. In February there was an exceedingly satisfactory decline in the admission rates for communicable diseases, as well as for all causes. In the force afloat, the situation as to pneumonia and cerebrospinal fever is very satisfactory. Scarlet fever has been slightly more prevalent than usual but in no sense epidemic; a very satisfactory decrease in measles; mumps continues as heretofore. In the fleet there were 1 case of cerebrospinal fever, 20 of German measles, 35 of measles, 167 of mumps, 26 of scarlet fever, 43 of pneumonia, lobar and broncho. Health conditions afloat are highly satisfactory.

Dr. Martin, in expressing the regrets of Surgeon-General Braisted of the Navy, who was unable to be present, said: "I was in Admiral Braisted's office one morning and found him getting reports by telephone from his various naval stations. From 8:30 to 10:30 o'clock every morning he receives these reports, and gives instructions, thus keeping in constant touch."

Before introducing Passed Assistant Surgeon C. P. Knight of the United States Public Health Service, who reported in the absence of Surgeon-General Blue, Dr. Martin read the following telegram received from General Blue:

"Washington, D. C., March 9, 1918.

"Dr. Franklin Martin, Chattanooga, Tenn.

"Request that you give publicity to the fact that Public Health Service is greatly in need of the services of competent sanitarians, particularly medical officers, sanitary engineers and scientific assistants. Salaries vary from \$1,800 to \$2,500 per annum. Applicants should address Surgeon-General, United States Public Health Service, Washington, D. C., stating in full experience and training which they have had.
"Blue."

Surgeon Knight's report summarized the good work done under his direction since September, 1917, in the five-mile zone around Chickamauga Park, a zone having 100,000 population, including 60,000 in Chattanooga. Concrete results included: Inspection of 375 restaurants, of which 148 complied with the regulations; 39 barber shops, of which 29 have been furnished card indicating full compliance; antityph campaign; examination of 2,500 employeecs of restaurants, barber shops and dairies, 3 per cent. being dismissed because of having communicable disease; complete survey of 3,000 rural homes, accompanied by educational talks resulting in orders for installation of sanitary privies; complete survey of private water supplies; inspection of all industrial plants, with corrections under way; submission of fuller reports by physicians, and all reported cases being tabulated and investigated; inspection of all dairies; pasteurization of about 30 per cent. of milk supply; eating establishments compelled to serve pasteurized milk; thorough medical inspection of Chattanooga schools and intensive rural school surveys recommended; providing Chattanooga with full-time physician and six public health nurses by the United States Public Health Service; establishment of unit for treatment of venereal diseases; conference with Attorney-General of Tennessee which led to Governor Rye's order to Chattanooga Board of Health to proclaim venereal diseases a menace to the civil and military population and directing it to make regulations for control in cooperation with the Provost Marshal, and steps under way to make this a state-wide campaign; and introduction and passage of ordinances in adjacent counties providing sanitary sewage disposal. Lieutenant-Commander Knight has been made a deputy health officer by county and city authorities.

Dr. Willim D. Haggard of Vanderbilt University read a statement for the Red Cross which showed that there are twenty base hospitals on active duty abroad and fourteen others mobilized of nineteen certified as ready for immediate service. Distribution of sweaters to soldiers and sailors and all Red Cross sources totals at least 1,250,000. Authority for Red Cross work within camps has been conferred by an official order signed by the Secretary of War. Contracts for convalescent houses in four camps have been let and others will soon be signed. Twenty-seven sanitary units cooperated with federal and state authorities in

February in seventeen different states. The four laboratory cars, "Reed," "Pasteur," "Lister" and "Metchnikoff," have been turned over to the Army Medical Corps. Venereal clinics are now in operation in seventeen camp cities.

Major William F. Snow reviewing the work of the Committee for Civilian Cooperation in Combating Venereal Diseases said that military medical advisors have been provided for state boards of health, municipal clinics are being placed, and an excellent moving picture film, "Fit to Fight," has been prepared to be shown at the camps as an educational measure.

Major Edward Martin, reporting for the Committee on States Activities, told of cooperation with the state societies in various ways. Reporting for the Editorial Committee, he mentioned the six manuals on medical military practice, all of which have been approved by the Surgeon-General's Office.

For the Committee on Surgery, Dr. Charles H. Mayo told how data on 21,000 physicians had been gathered and placed on cards convenient for the ready selection of individuals and groups suited for any given task, a duplicate set of which cards has been prepared for the use of the Surgeon-General's Office in France. Dr. Mayo emphasized the need of reconstructing wounded men, not only for field service, but also for labor after the war, inasmuch as the usual tide of immigration has ceased. Citing the many government activities in which medicine enters, he said these relations, he believed, could be coordinated in no way except by having a medical man as a cabinet officer. He closed with this plea for recognition of medical military men:

"Medical men must have adequate rank. They are entitled to it. For it is not as if they were at work in the military service doing work to which they are new and unaccustomed. They are working in the line to which they have given their lives. They can't do their best unless they have adequate recognition and rank."

In the absence of Miss M. Adelaide Nutting, chairman, Miss Ella Phillips Crandall, secretary, reported for the Committee on Nursing. The total nurses enrolled to date are 18,344, of whom 10,000 have enrolled with the Red Cross since April 6, 1917. The Red Cross had supplied the Army with 6,220 up to March 1, and 1,000 to the Navy and Public Health Service. As insufficiency of nurses in December was due in some camps to lack of housing accommodations, and in others to the fact that a larger quota had not been called for, the committee recommended to the Surgeon-Generals of the Army and Navy that suitable accommodation be provided in adjacent towns where necessary; that there be a quota of not less than one nurse to six acutely ill men; that a reserve of twenty-five above the prescribed quota be stationed at each hospital; that Miss Anne W. Goodrich be assigned to inspect military and naval hospitals, and that superintendents of three-year training schools graduate the 1918 classes early. These recommendations received unanimous endorsement of the Executive Committee of the General Medical Board, the Surgeon-Generals and the Secretary of War, since which time all demands for nurses have been met. The committee is continuing its campaign to attract young women into training schools and is cooperating in the courses to be given at Vassar College this summer for young women who shall have registered for entrance to a graduate school of nursing in October, these women then being eligible for graduation in two years instead of three. Appeals to training schools and professional registries, together with the Red Cross campaign for nurse enrolment, will, the committee believes, readily provide the 5,000 additional nurses who, it is expected, will be required

by June 1; and that the total of 37,500 graduates will be furnished as needed. The committee is seeking relative rank as recognition for Army and Navy nurses, they having all been provided for in the war risk insurance law through the committee's efforts.

Miss Crandall, also reporting for the Subcommittee on Public Health Nursing of the Committee on Hygiene and Sanitation, told of an experiment in two states in cooperation with the food administration whereby public health nurses are to have special instruction in food economics.

Dr. Jabez Jackson of Christian Church Hospital, Kansas City, Mo., spoke of the need of nurses to take the place of experienced nurses who have gone into military service, saying that twelve out of fifteen nurses had gone from one hospital in his city. He advocated special attention to nurse apprenticeship in hospitals.

Introduced as president-elect of the American Medical Association, Dr. Arthur Dean Bevan expressed the confident belief that, whether the war lasts three years or five years and requires 3,000,000 men or 5,000,000 men, the medical profession will continue to stand by "until the job is finished." He said: "It is the one business of the American Medical Association to educate the profession to realize the extent of the work before it. At our great meeting in June I should like to have back with us such men as Osler and Dupage to tell us at first hand something of their work and the need for such work as theirs on the other side."

Major John D. McLean told of the progress of the plans for the Volunteer Medical Service Corps, reading the conditions of membership. This body will be open to reputable physicians ineligible to the Medical Officers Reserve Corps because they are over the age of 55, on account of physical disability, or because of necessity for home service, or other good reason. "An organization of the doctors at home to do a something when there is a something to do" was the way Dr. McLean summarized the function of this new organization which will act when called on by the Surgeon-Generals of Army, Navy or Public Health Service. He emphasized the fact that this organization "will not protect slackers at home." Dr. McLean exhibited an attractive design proposed for insignia.

Lieut.-Col. Victor C. Vaughan, reporting for the Committee on Legislation, told of the request of the Army medical officers for higher rank and greater authority, and of the Owen-Dyer Bill (S. 3748 and H. R. 9563) now pending in Congress. He cited instances which he said indicated need for greater rank, and then read the following letter from President Wilson to Dr. Franklin Martin, endorsing the bill:

"5 March, 1918.

"My dear Dr. Martin:

"I read very carefully your memorandum of February 27 about the rank accorded members of the Medical Corps of the Army and have taken pleasure in writing letters to the chairmen of the Military Committees of the House and Senate, expressing the hope that the bill and resolution may be passed.

"Cordially and sincerely yours,
"Woodrow Wilson."

"Dr. Franklin Martin, Advisory Commission, Council of National Defense."

The dedication exercises on Monday morning, March 11, were attended by a throng which filled the auditorium to overflowing. On the stage was a notable group of Army medical officers, with a sprinkling of civilian doctors of national and international fame. Lieut.-Col. Roger Brooke presided. Those on the

stage included: Surg.-Gen. William C. Gorgas, Brig.-Gen. J. B. Erwin, in command of Camp Forrest; Col. Henry Page, Dr. Franklin Martin, member Advisory Commission, Council of National Defense and chairman General Medical Board; Col. E. L. Munson, Lieut.-Col. V. C. Vaughan, Lieut.-Col. William H. Welch, Johns Hopkins University Medical School; Major Charles H. Mayo, president American Medical Association; Dr. Arthur Dean Bevan, president-elect American Medical Association; Dr. Edward P. Davis, Philadelphia; Major John D. McLean, Major Stuart McGuire, Major George E. de Schweinitz, and many others.

After music by the Camp Greenleaf orchestra and invocation by Bishop Thomas F. Gailor, Episcopal Bishop of Tennessee, Dr. John G. Clark of Philadelphia made the speech of formal presentation of the \$10,000 auditorium on behalf of Mrs. William McLean, whose son, Warden McLean, while in the officers' training camp at Fort Oglethorpe, was accidentally killed. Col. Henry Page, who, since his graduation from the University of Pennsylvania School of Medicine in 1894, has been continuously in the Regular Army, and whose efficient untiring efforts have transformed the site which in 1898 was the dumping ground for the Chickamauga Camp, made the speech of acceptance. He said it is his ambition to have here a great postgraduate training camp, and that he hopes to see the temporary buildings replaced by permanent structures.

He was followed by General Gorgas, who argued convincingly for military training for medical officers. He said that notwithstanding handicaps, the present American Army has established a sanitary world's record, for it has cared for 1,000,000 men and the death rate is ten men per thousand, whereas Japan during the Russo-Japanese War was deemed to have accomplished a marvel when she kept her death rate down to twenty per thousand. "This is but the beginning of Camp Greenleaf," he said. "This probably will be the focus of our medical activities." He said that Camp Greenleaf, located in the geographic center of 450,000 troops in training, seems the logical location for the one great medical training ground, with accommodations there possibly for 40,000 men, trebling its present capacity. He expressed a wish that the Council of National Defense might interest itself in such a project, and he said: "From past experiences I am sure of their interest."

Brig.-Gen. J. B. Erwin, the commandant at Camp Forrest, adjacent to Chattanooga, in a happy speech indicative of the present cordial cooperation of the line officer with the medical branch of the service, evoked enthusiastic applause when he advocated a detention cantonment for the "laundering" of recruits before they are allowed to mingle with the men in camp—thus decreasing the chances of mumps and measles, diseases which, he said, are certain to break out wherever bodies of men are gathered in camp or barracks.

Lieut.-Col. Victor C. Vaughan recalled a visit to Berlin in 1907 and a talk with Wassermann, the German medical authority, in which the latter expressed a fear that the 50,000 soldiers quartered in Berlin and the other like units in other cities indicated that "some day" Germany's military leaders would plunge that country in war which might mean the dismemberment of the empire. Dr. Vaughan expressed the hope that some day he might walk through the streets of Berlin and see flying from public buildings the flag, not of France, nor of Britain, nor of the United States, but of the German republic.

Dr. Vaughan, reverting to conditions at Chickamauga as he found them in 1898, when there was not a single microscope nor test tube in the camp, con-

trusted those conditions with the fact that a medical camp has here been established. He contrasted the attitude of the line officer of those days with the work-together spirit of today.

Dr. Edward P. Davis of Philadelphia praised the spirit of the doctors in training, and reminded the audience that physicians really entered the profession of war when they became medical students. "You are soldiers by inheritance and training," he said.

A review in the afternoon of the 12,000 men in the various medical and sanitary units, with a field hospital demonstration, had a dramatic setting. From the knoll overlooking the parade ground from the east several score interned Germans, ranged behind the wire of their stockade, viewed the spectacle, while on the western side of the field was the immense crowd of civilian visitors who came by automobile and trolley. Well in their rear, towering high above, rose historic Lookout Mountain.

The Warden McLean auditorium building is situated in the center of Camp Greenleaf. Besides the main assembly hall there are several smaller rooms, including orthopedic museum, library and reference room, lecture rooms, study rooms and office. Since the opening of the camp 4,000 officers and 20,000 enlisted men have been trained and sent to duty abroad or to instruct at other camps.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.
 Carter-Shannon County Medical Society, Jan. 9, 1918.
 Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.
 St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.
 Henry County Medical Society, Jan. 24, 1918.
 Moniteau County Medical Society, Jan. 28, 1918.
 Camden County Medical Society, Feb. 1, 1918.
 Scott County Medical Society, Feb. 2, 1918.
 Cedar County Medical Society, Feb. 8, 1918.
 Clark County Medical Society, Feb. 8, 1918.
 Cooper County Medical Society, Feb. 13, 1918.
 Atchison County Medical Society, Feb. 18, 1918.
 Ralls County Medical Society, March 10, 1918.
 Pulaski County Medical Society, March 11, 1918.
 Pemiscot County Medical Society, March 25, 1918.
 Cape Girardeau County Medical Society, March 28, 1918.
 Vernon County Medical Society, March 28, 1918.
 Putnam County Medical Society, April 11, 1918.
 Cass County Medical Society, April 13, 1918.
 Laclede County Medical Society, April 15, 1918.

Missouri State Medical Association

Sixty-First Annual Meeting Missouri State Medical Association, Jefferson City, May 6, 7 and 8

PROGRAM

FIRST DAY—MONDAY, MAY 6, 1918

HOUSE OF REPRESENTATIVES

- House of Delegates called to order at 9:30 a. m.
 Roll call.
 Reading of minutes of previous meeting.
 Reading of President's message and recommendations.
 Appointment of Committee on Nominations.
 Report of Committee on Arrangements.
 Report of the Judicial Council.
 Report of Secretary.
 Report of Treasurer.
 Report of Committee on Scientific Work.
 Report of Committee on Health and Public Instruction.
 Report of Defense Committee.
 Report of Publication Committee.
 Report of Committee on Medical Education.
 Report of Committee on Constitution and By-Laws.
 Report of Committee on Cancer.
 Report of Committee on Blindness.
 Report of Committee on Vaccination.
 Report of Committee on Expert Testimony.
 Report of Committee on Necrology.

RECESS TILL 3 P. M.

- Report of Judicial Council.
 Reports of Reference Committees.
 Reading of Resolutions, Memorials, etc.
 Report of Committee on Nominations.
 Election of President.
 Selection of place of next meeting.
 Miscellaneous business.

JUDICIAL COUNCIL

Judicial Council meets at 1 p. m. in Committee Room, House of Representatives.

- 1st District.....E. L. Crowson, Pickering
 2d District.....O. C. Gebhardt, St. Joseph
 3d District.....G. W. Whiteley, Albany
 4th District.....J. B. Wright, Trenton
 5th District.....J. R. Bridges, Kahoka
 6th District.....P. F. Cole, Ewing
 7th District.....J. D. Smith, Shelbina
 8th District.....L. W. Cape, Maplewood
 9th District.....A. R. McComas, Sturgeon
 10th District.....D. A. Barnhart, Huntsville
 11th District.....G. W. Hawkins, Salisbury
 12th District.....Spence Redman, Platte City
 13th District.....F. E. Murphy, Kansas City
 14th District.....C. T. Ryland, Lexington
 15th District.....H. S. Crawford, Harrisonville
 16th District.....E. N. Chastain, Butler
 17th District.....W. J. Ferguson, Sedalia
 18th District.....J. B. Norman, Tipton
 19th District.....S. V. Bedford, Jefferson City
 20th District.....A. H. Hamel, St. Louis
 21st District.....G. M. Rutledge, Ste. Genevieve
 22d District.....G. S. Cannon, Farnfeld

- 23d District.....J. H. Timberman, Marston
- 24th District.....William Spaulding, Poplar Bluff
- 25th District.....O. A. Smith, Farmington
- 26th District.....W. H. Breuer, St. James
- 27th District.....H. C. Shuttee, West Plains
- 28th District.....T. O. Klingner, Springfield
- 29th District.....R. L. Wills, Neosho

PUBLIC MEETING

MILITARY SESSION

MONDAY, MAY 6, 1918—8 P. M.

HOUSE OF REPRESENTATIVES

- Address of Welcome
Hon. Frederick D. Gardner, Governor
- The Military Forces of Missouri
Gen. Harvey C. Clark, Adjutant General
State of Missouri
- Responsibility of the Medical Profession to the Crip-
pled Soldier; Illustrated
G. Canby Robinson, M.D., St. Louis
- Address
Major Franklin Martin, Chairman, General Medi-
Board, Council of National Defense, Washing-
ton, D. C.
- Address
John Young Brown, M.D., Medical Aide to the
Governor, St. Louis
- Motion Pictures of the War
Major W. H. Luedde, St. Louis

GENERAL MEETING

TUESDAY, MAY 7, 1918—9 A. M.

HOUSE OF REPRESENTATIVES

- Address by the President
Robert E. Schlueter, M.D., St. Louis
- Sterility Due to Retrodisplacement of the Uterus;
the Nonoperative and Operative Treatment
E. Lee Dorsett, M.D., St. Louis
- Vaginal Drainage in Pelvic Cases
Frank Hinchey, M.D., St. Louis
Discussion opened by Dr. Roland Hill, St. Louis
- Surgical Aspects of Abdominal vs. Pelvic Delivery
E. D. Twyman, M.D., Independence
Discussion opened by Dr. B. A. Poorman, Kansas
City
- Can We Disregard the Calendar in Setting a Date
for Labor?...F. T. Van Eman, M.D., Kansas City
- Asphyxia in the New-Born
B. G. Hamilton, M.D., Kansas City
Discussion opened by Dr. G. D. Royston, St. Louis
- (1) The Passing of the Curette—Conservative Treat-
ment of Abortion
- (2) Unusual Prevalence of Eclampsia—Fifteen Cases
in January and February, 1918
George C. Mosher, M.D., Kansas City
Discussion opened by Dr. W. C. Gaylor, St. Louis
- Multiple Transfusion with Splenectomy in Pernicious
Anemia with Study of a Case
E. J. Schisler, M.D., St. Louis
- The Hodgen Splint in Treatment of Fractures of
Femur.....F. C. Sherwin, M.D., St. Louis
- The Hodgen Extension Suspension Splint; Its Use
Exemplified in Both Civil and War Practice
F. G. Nifong, M.D., Columbia
Discussion opened by Dr. R. M. Funkhouser, St.
Louis

GENERAL MEETING

TUESDAY, MAY 7, 1918—1 P. M.

HOUSE OF REPRESENTATIVES

- U. S. Aviation Examinations: A Clinical Demonstra-
tion of the Tests.
A. W. McAlester, Jr., M.D., Capt. Calvin Cooper
and Lieut. S. E. Roberts, Kansas City Avi-
ation Unit, Kansas City
- Pulmonary Tuberculosis, Its Diagnosis and Prognosis
S. P. Child, M.D., Kansas City
- What the Laboratory Can and Cannot Do in the
Diagnosis of Tuberculosis
R. B. H. Gradwohl, M.D., St. Louis
Discussion opened by Dr. J. J. Singer, St. Louis
- Head Pain from Rhinological Viewpoint
U. S. Short, M.D., St. Louis
- Nasal Sinuscs and Asthma
A. J. Lorie, M.D., Kansas City
- Chronic Backache from an Orthopedic Standpoint;
Causation and Treatment, Illustrated
A. E. Horwitz, M.D., St. Louis
- Painful Feet...R. M. Schaufler, M.D., Kansas City
- Prevention of Deformities in Times of Peacc and
War. Illustrated with Slides
B. Belove, M.D., Kansas City
- The Small Hospital in Rural Places; Classification
and Benefits.....N. I. Stebbins, M.D., Clinton
Discussion opened by Dr. J. M. Yater, Nevada

GENERAL MEETING

WEDNESDAY, MAY 8, 1918—9 A. M.

HOUSE OF REPRESENTATIVES

- Preliminary Observations on Hypertension
Elsworth S. Smith, M.D., St. Louis
- Systemic Effects of Goiter as Observed in Rural
Practicc.....E. H. Miller, M.D., Liberty
- The Operative Indications and After-Treatment in
Goiter Surgery..Willard Bartlett, M.D., St. Louis
- Remarks on Angiomata, with Slides
Francis Reder, M.D., St. Louis
- Illustrative Lesions of Syphilis as Found in Routine
Autopsies.....R. L. Thompson, M.D., St. Louis
- Prostatic Enucleation
Leon Rosenwald, M.D., Kansas City
- A Plea for Improved Laboratory Service for the
Entire State.....E. L. Spence, M.D., Fulton
- Need of Well Equipped Laboratory in Connection
with State Board of Health
W. A. Clark, M.D., Jefferson City
Discussion opened by Dr. G. H. Jones, Jefferson
City

**TENTH ANNUAL MEETING OF MISSOURI
SOCIETY OF MEDICAL SECRETARIES**

TUESDAY, MAY 7, 1918—1:30 P. M.

COMMITTEE ROOM, HOUSE OF REPRESENTATIVES

OFFICERS

- President—Spence Redman, M.D., Platte City
- First Vice President—J. D. Seba, M.D., Bland
- Second Vice Pres.—J. A. McComb, M.D., Lebanon
- Secretary—J. Q. Cope, M.D., Lexington
- An interesting program is being arranged for this
session.

SECRETARIES' BANQUET

TUESDAY, MAY 7, 1918—6 P. M.

CENTRAL HOTEL

- Address.....Robert E. Schlueter, M.D., St. Louis

ST. LOUIS MEDICAL SOCIETY

Meeting of the Council, Feb. 13, 1918

The meeting was called to order at 8:45 p. m., Dr. Elsworth S. Smith presiding. The minutes of the previous meeting were read, corrected and approved.

On motion the order of business was suspended and the report of the Library Committee was read by Dr. Walter Baumgarten who gave a résumé of the committee's work during the month and outlined a budget for 1918.

Dr. Gayler moved that the library report be received. Carried.

Dr. Baumgarten asked the advice of the council as to whether or not the unexpended income from the Boisliniere and Gregory funds could be used during this year.

It was moved that the Library Committee be authorized to expend the interest on the Boisliniere and Gregory funds not expended last year and also the interest on these funds for 1918.

Dr. Kane moved that it be the sense of this council and that the sense of this council be given to the medical society at its next meeting that the by-laws be set aside and that a leave of absence be granted any officer of the society during the period of the war who is engaged in government work.

Seconded by Dr. Gayler. Carried.

The question of the membership of Dr. William Porter, an honorary member, was brought up and the secretary was instructed to inform him of the action of the general society at its meeting on Nov. 9, 1913. Carried.

A letter from Dr. F. N. Gordon resigning from the society because of having enlisted in the Medical Officers Reserve Corps was read.

Dr. Hamel moved that action on all resignations be deferred until the annual meeting of the Missouri State Medical Association in May.

Dr. Kane offered a substitute that it be the sense of the council that no member serving under the colors be dropped from membership because of failure to pay his dues and that the by-laws referring to members in service be suspended until after the meeting of the Missouri State Medical Association in May. Carried.

The president read the resignation of Dr. Schlueter as councillor.

In accordance with the above motion it was moved that he be granted a leave of absence while serving in the Medical Officers Reserve Corps.

The secretary read a report for the Membership Committee recommending:

Ronald Gzell, Frisco Building; Adelheid C. Bedel, 858 Clara Ave.; Garnet C. Lyttle, 2407 N. Broadway; John Barnes, 1717 N. Jefferson Ave.; Walter Loescher, 2803 Wash St.; Christi Karabassneff, 216 Lindon St.

They suggested that Drs. G. Alexander Jordon, Adolph L. Merz and Genevieve S. Beckham be reinstated to active membership without republication in the *Bulletin*.

It was moved that action on the report of the Membership Committee be deferred and that a member of the committee be requested to appear in person to present their report.

Dr. Homan presented a report for the Necrology Committee stating that while the Necrology Committee had held no formal meetings, still views had been exchanged and that they were prepared to perform as best they could such duties as might unhappily be imposed on them through the causes of nature.

It was moved that the report be filed.

Dr. Neuhooff reported that the Censors Committee had held but one meeting and had elected Dr. John McH. Dean secretary.

It was moved that the report be received and the committee commended for its early activities. Carried.

Dr. Caulk reported for the Program Committee, outlining in detail the program up to April 6. He asked for \$300 to cover railroad expenses for prominent guests.

It was moved that the report of the committee be received and that the thanks of the council be expressed to these gentlemen for the way in which they have gone about their work. Carried.

It was moved that that section of the report of the Program Committee relating to the expenditure of money be referred to the Budget Committee. Carried.

Dr. Funkhouser asked that he be put on record as not favoring an appropriation for the Program Committee.

Dr. Reder reported orally for the Health and Public Instruction Committee.

Dr. Schwartz, secretary of the Ethics Committee, reported that they had under consideration the standing of the Vine Grove Hospital conducted by Dr. C. A. Trotman. He also reported having received an anonymous communication stating that Dr. C. M. Westerman had been taken off a ship bound for France and accused of being a German spy and was interned at Fort Oglethorpe.

Dr. Schwartz read a letter from the Surgeon-General's Office stating that Dr. Westerman was doing splendid work at Fort Oglethorpe and that they had no reason to question either his patriotism or his ability.

The Bartscher Fund Committee reported that they had held one meeting for the purpose of organizing and that Dr. Gundlach was elected secretary. He also stated that their committee had not taken over the custody of the Bartscher Fund pending the audit of Price, Waterhouse & Company.

It was moved that the Bartscher Fund Committee be instructed to include in their report the number of meetings held and the names of committee members present at each meeting. Carried.

It was moved that the Auditing Committee be instructed to secure an immediate audit from Price, Waterhouse & Company or by some other certified auditor. Carried.

The application of Dr. Clay Allen by transfer from the Henry County Medical Society was read for the first time.

The council elected the following members to the Hospital Committee: Dr. W. C. G. Kirchner, chairman; Louis J. Oatman and Harry R. Hall. Carried.

Dr. Seabold gave an itemized report of the receipts and expenditures of the Business Bureau Committee.

On motion the report was received.

The chair presented letters from the American Trust Company, the Boatmen's Bank Building, the St. Louis Union Trust Company, Mississippi Valley Trust Company and the National Trust Company in regard to handling the securities of the Bartscher Fund.

It was moved that the proposition of the American Trust Company agreeing to hold for safe keeping the securities of the St. Louis Medical Society at a nominal charge of \$25 be accepted, with the distinct understanding that the securities are not to pass out of the hands of the Bartscher Fund Committee of the St. Louis Medical Society. Carried.

Dr. Gundlach reported orally for the House Committee.

The application of Dr. Elmer E. Holt for corresponding membership was read and he was unanimously elected.

The chair announced the appointment of Dr. Frederick A. Baldwin a committee of one to represent the St. Louis Medical Society at meetings of the Public Health League. He also announced the appointment of Dr. Frederick J. Taussig to the Red Cross Committee to take care of the cases referred to us by the American Red Cross, Navy Recruiting Station and the Soldiers and Sailors Club.

A letter from the War Department, Commission on Training Camp Activities, asking permission to address the society and to secure subscriptions for Smileage Books was read.

It was moved that the communication be read to the general society and that it be published in the *Bulletin*. Carried.

Dr. Rehfeldt moved that if the secretary finds that the office help is incompatible with the administration of the affairs of the office that he be authorized to discharge and employ whatever help he sees fit. Carried.

Councilors present: Drs. Baldwin, Boisliniere, Funkhouser, Gayler, Hamel, Kane, Kuhlmann, North, Rehfeldt, Tupper, Smith, Gundlach.

Councilors absent: Drs. Bliss, Schlueter.

Meeting of March 9, 1918

The meeting was called to order at 8:40 p. m. by the vice president, Dr. Phelps G. Hurford. The minutes of the previous meeting were read and approved. The scientific program consisted of a "Demonstration by Moving Pictures of Medical Conditions," by Dr. K. C. Peacock, Washington University.

Discussion by Drs. George Dock, Samuel E. Peden and Joseph Grindon; Dr. Peacock closing.

"Etiology of Alopecia Areata," by Dr. Joseph Grindon.

Discussion by Dr. Boisliniere; Dr. Grindon closing.

"A Comparative Analysis of End Results in the Prostatectomized Patient Based upon 110 Cases (55 Suprapubic, 55 perineal)," by Dr. Clarence Martin.

Discussion by Drs. Cyrus E. Burford, John R. Caulk, Orril LeGrand Suggett, Francis Reder; Dr. Martin closing.

The secretary read a communication for the Missouri State Medical Association, an amendment to the constitution of the Missouri State Medical Association which shall read as follows:

ARTICLE 8, SECTION 3

The president, vice president and councilors shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of councilor, and no person shall be elected to any office who has not been a member of the Association for the previous two years.

Adjournment 11 p. m.

Meeting of March 16, 1918

The meeting was called to order at 8:50 p. m. by the president, Dr. Elsworth Smith. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

Major Jump, guest of the society, addressed the society on the need of more medical men in the Medical Reserve Corps, stating that the new draft will need 8,000 more doctors.

Dr. M. T. Burrows read a paper entitled, "Study of Infantile Paralysis," illustrated by lantern slides.

Discussion by Drs. G. Canby Robinson and Henrietta A. S. Borck; Dr. Burrows closing.

Dr. Henry J. Scherck read a paper entitled, "Diagnosis of Some Cases of Kidney and Bladder Condi-

tions from the Standpoint of the X-Ray and Other Methods of Precision."

Discussion by Drs. Bransford Lewis, George M. Phillips and Edward H. Kessler; Dr. Scherck closing.

The secretary read the following communication from the council:

"At the council meeting of February 13 the following motion was made and seconded:

"At the council meeting held on February 13 Dr. Kane moved that it be the sense of this council that the sense of this council be given to the medical society at its next meeting that the by-laws be set aside and that a leave of absence be granted any officer of the society during the period of the war who is engaged in government work. Seconded by Dr. Gayler."

Dr. Hamel moved approval of the council act in granting a leave of absence to members of the society in active service. Seconded by Dr. Gayler. Carried.

The secretary read a report from Dr. William T. Coughlin on cost of uniforms.

A motion was made that the report be received and accepted. Seconded by Dr. Shutt. Carried.

Dr. Stone moved that the report be published in the *Bulletin*. Seconded.

Attendance 150.

ARTHUR GUNDLACH, Secretary.

Meeting of March 23, 1918

The meeting was called to order at 8:40 p. m. by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

Exhibition of patients by Dr. William T. Coughlin: (1) Benign sarcoma of the loin. (2) Large resection of the ribs for empyema.

The scientific program consisted of a Symposium on Focal Infections:

General Medical Aspect, by Dr. Louis H. Hempelmann. Focal Infections of the Oral Cavity, with lantern slide demonstration, by Dr. Herbert Muench. Focal Infections of the Colon, by Dr. Horace W. Soper. Focal Infections of the Rectum, with lantern slide demonstration, by Dr. William H. Stauffer.

Discussion by Drs. William Engelbach, Walter Mills, Frederick O. Schwartz, Ella Marx, Samuel E. Peden, Meyer J. Lippe, E. Lee Myers, Augustin Munsch, Louis C. Boisliniere, Albert H. Hamel, Elsworth S. Smith; Drs. Hempelmann, Muench, Soper and Stauffer closing.

The secretary read a copy of the following telegram sent to the Hon. Robert L. Owen, United States Senate, Hon. L. C. Dyer, United States House of Representatives, and to the Secretary of War by the Missouri State Committee Council of National Defense, and the reply of the War Department:

March 17, 1918.

Associated Press dispatches state today that the War Department has interfered with the free expression of his opinion by the Surgeon-General of the Army, on the Owen-Dyer bill granting adequate rank and authority to Medical Officers. In view of the published approval of this measure by the President, we confidently hope that this morning's report is erroneous.

The opposition to the Owen-Dyer bill has seriously hampered the efforts of the government to secure an adequate number of physicians for our rapidly growing National Army. The passage of this bill will place our own Medical Officers on a basis equivalent with that of the Medical Officers of Great Britain, France, Italy, Japan, our own Navy and the forces of the enemy.

These provisions are absolutely essential for the conservation of the life and health of our soldiers.

(Signed) HARVEY G. MUDD, M.D.,

Chairman.

WASHINGTON, D. C., 7 p. m., March 18, 1918.

Harvey G. Mudd,

Care Missouri State Committee, Humboldt Bldg.,
St. Louis.

Your telegram with reference to Owen-Dyer bill received. Your statement that the provisions of the bill are absolutely essential for the conservation of the health and life of our soldiers is entirely erroneous. The bill does not increase either the number of officers or men in the Medical Department, but it does make three and one-half times as many major generals in the Medical Corps as there are in the entire regular army, a force much larger. It also authorizes a larger number of brigadier generals than there are in the entire regular army. The provisions of the bill are indefinable and the War Department is absolutely opposed to its passage.

(Signed) BENEDICT CROWELL,
Acting Secretary of War.

Dr. Hamel moved the society heartily endorse the telegram of Dr. Mudd embodying the sincerity of the medical profession of St. Louis. Seconded.

Dr. Koetter reported that the uniform report appeared in the home edition of the *Post-Dispatch*, but that in the evening and later editions it was withdrawn. He also reported that Browning & King had reduced the price of uniforms to \$10.

Adjournment 10:55 p. m. Attendance 150.

Meeting of March 30, 1918

The meeting was called to order at 9:15 p. m. by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and, after correction by the motion of Dr. Goodwin that the telegram of the War Department in reply to Dr. Mudd's telegram be incorporated in the minutes, were approved.

Drs. Hudson Talbott and Willard Bartlett presented an interesting specimen of lymphosarcoma treated by radium.

Discussion by Drs. Francis Reder, Bransford Lewis and Oscar Elbrecht.

The scientific program consisted of a continuation of the focal infection symposium:

1. Focal Infections of the Nose and Throat, by Dr. William E. Sauer.

2. Focal Infections, Abdominal Phase with presentation of the specimen, by Dr. Oscar H. Elbrecht.

3. Focal Infections of the Female Genitalia, by Dr. Frederick J. Taussig.

Discussion by Drs. William E. Shahan, Grandison D. Royston, Frank Hinchey and Francis Reder; Drs. Sauer, Elbrecht, Greditzer and Taussig closing.

The secretary read a communication from the committee on Construction and Equipment of Three Hundred and Fifty-Fourth Infantry, Missouri Building, at Camp Funston, Kansas, asking for subscriptions.

Dr. Hudson Talbott moved that the society raise the necessary amount through a subcommittee, the subcommittee to be appointed by Dr. Smith. Seconded by Dr. Hopkins. Carried.

Dr. Smith appointed Dr. Hudson Talbott, chairman of the committee, the chairman to appoint his associates on the committee.

The subscriptions to the building collected that evening and up to date amount to \$118.

Dr. Smith suggested that the letter be published in the *Bulletin*.

Dr. Hinchey inquired about the service flag and was informed that as soon as the necessary stars were added the service flag would be displayed from the front of the building.

Attendance 125.

ARTHUR GUNDLACH, MD., Secretary.

PROCEEDINGS OF WASHINGTON UNIVERSITY MEDICAL SOCIETY

Forty-Eighth Meeting, Feb. 11, 1918

I. EXHIBITION OF CASES.

A. A CASE OF SYPHILIS OF THE LIVER.—
By DR. JEANS.

A CASE OF MULTIPLE BONE SYPHILIS.
—By DR. JEANS.

Discussed by Dr. Sachs.

B. PRIMARY SYPHILIS OF THE LIP.—By DR.
ALBERT R. TORMEY.

W. B., negro, aged 48; janitor. This case was admitted to Barnes Hospital on Feb. 9, 1918, complaining of numbness and pain in limbs and eruption of skin. F. H. was negative, but it should be noted that he has ten children, nine of whom are living and well. P. H. negative, patient denies any specific infection. P. I. began about Dec. 15, 1917, when he scratched his lower lip with a nail while lifting a barrel off a shelf. During the Christmas season he was very proficient in the art of osculation and says that shortly after this time the scratch became enlarged and persistently refused to heal. Four weeks later, or about January 25, he noticed the eruption on his skin. This was followed by vague pains in joints and epigastrium.

Physical examination shows a general glandular enlargement varying in size from a pea to a lima bean. The hair on outer border of eyebrows very thin. Pupils small, slightly irregular, but react to light and accommodation. On the lower lip just left of the midline there is a fairly large, somewhat irregular, erythematous area, slightly indurated and covered with a parchment-like layer of epidermis. He has marked pyorrhea. The heart and lungs are negative; there is no evidence of old scar on genitals; his skin is dry and covered with a diffuse macular, papular, annular eruption which is indurated, slightly elevated and which has a tendency to form circles. The lesions are somewhat scaly, pearly white in color and are on arms, legs and body. Those on the genitals are typical annular, papular syphilides, which are characteristic of the disease in this race. Blood Wasserman 4+; spinal fluid negative. Diagnosis: Syphilis of the lip with secondary eruption.

The extra-genital chancre is a comparatively common lesion to the dermatologist, but is not so frequently seen in general practice or hospital work. That is one of the reasons this case is presented to-night. Others are age of patient and source of infection. While the history in this case would lead one to believe that the infection was contracted through kissing, still it is impossible to rule out dishes, towels, drinking cups, etc. It might be well to note that physicians are innocent victims, especially to chancres on the hand.

The main points to emphasize are the frequency of extra-genital chancres, and the large number of medical men affected; the value of early diagnosis followed by intensive treatment; and the need of further work along prophylactic lines, with proper instruction to syphilitics in regard to gravity of the disease.

A good rule to follow in case of any persistent sore, no matter where the location or how trivial, is to think it an extra-genital chancre until proven otherwise.

C. A CASE OF SPINAL LESION.—By DR.
GILLILAND.

Case of Morris L., aged 40, white, male. This case is presented because of an unusual paralytic condition of the arms and shoulders and an atrophy of the muscles in these regions.

The family history of the patient is unimportant. Past history, typhoid at 24 years. Patient is a machinist but did not come in contact with lead. Used twenty cigarettes daily. Venereal history negative.

Present trouble began September, 1914, with feeling of cold in the fingers of the left hand, later forearm and arm. Within two years power of motion was altogether lost. In the summer of 1915 the right hand, forearm and arm were similarly affected and power of motion almost completely gone within six months.

For the past six months there has been no change in the patient's condition. Patient notices no trouble in the lower extremities. The principal findings in this case are the paralysis of the shoulder girdles and arms, and the sensory changes of the arms, upper trunk and neck. There is a complete loss of sense of heat and cold over the anterior and posterior aspects of both arms, over the chest above the nipple line and over the chest posterior above the angles of the scapula extending over the neck, front and back, and up over the side of the face on both sides.

There is an area half the size of the hand in the left flank where the application of cold causes pain internally. There is some diminution of perception of pin prick over the left arm and the right forearm and upper arm. The right side of the chest shows better perception than the left, but both are abnormally diminished. The reflexes of the upper extremities are absent. Lower extremities show exaggerated quadriceps, knee jerks, plantar and Achilles reflexes. No Babinski, clonus or Oppenheim. Strength fairly good in both legs. At time of admission perception of pin prick was found to be present but slightly diminished over the left upper thigh.

This case is considered probably one of syringomyelia because of the paralysis and the dissociation of sensation of heat, cold, pin pricks, etc.

The Wassermann test on the blood and spinal fluid is negative. The other laboratory examinations did not vary from the normal.

DISCUSSION

DR. SACHS: This case presents a good many difficult problems in diagnosis. Briefly summarized Dr. Gilliland has stated that there is a very marked paralytic lesion involving that portion of the cord which supplies the arm. Below that he has a very moderate amount of spasticity. There is evidence of increased reflexes, but in the region supplied by the brachial plexus there is a marked lesion. The first problem is whether we are dealing with a systemic disease or whether with a focal lesion, that is, some form of progressive muscular atrophy. In the first place, in progressive muscular atrophy, there are no sensory changes and one does not see paralysis in two extremities and increased reflexes in the others, so it must be a focal lesion. Now in the next place, the problem comes up, what kind of a pathological process could give you marked paralysis in two extremities and moderate increased reflexes in the others? Perhaps the next thing we think of would be fluid. In classical cases of syringomyelia, dissociated sensations are characteristically found, so that it is possible to explain this case by a fluid tumor, which has produced marked lesions of the cervical cord and slight symptoms in the lower portion. Then the question comes up, could any form of growth give this picture? There have been tumors described by a number of people which simply encase the cord but do not compress it.

There is one symptom which is rather characteristic of spinal tumor. That is, a localized point of tenderness on the spine, just about the first and second cervical vertebra. Dr. Kasak has found that

there are no muscles that are involved that get their nerve supply from the fifth cervical segment. Every muscle that gets its nerve supply from the fifth segment has function. The muscles below that are paralytic. That seems to me to suggest a focal lesion. I am inclined to believe that it is more probably a syringomyelia. I do not think you can exclude a tumor high up. I think he should be explored.

DR. KASAK: This case closely resembles a classical case of syringomyelia of eight years' duration reported by Schlesinger. The cases, however, differ somewhat. The case of Schlesinger showed marked trophic changes and the disease began in the muscles of the shoulder girdle, while this case shows very little trophic changes and the disease began in the intrinsic musculature of the hand. This particular case, apparently, is a case of syringomyelia. I think, however, that syringomyelia starts as a gliosis, a solid tumor, which only later degenerates and forms an elongated cystic cavity. Therefore, a surgical exploration with view of a possible enucleation of the tumor, seems to me to be advisable.

DR. DOCK: I wish to call attention to the wasting of the muscles. The deltoid is practically gone. On the other hand there is hypertrophy in the calf muscles. Reflexes vary at different times. For the most part the leg reflexes have been distinctly increased.

D. A STAB-WOUND OF THE BRONCHIAL PLEXUS.—By DR. STALEY.

Discussed by Dr. Sachs.

2. EXPERIMENTAL OBSERVATIONS ON ANAPHYLAXIS IN THE DOG.—By DR. PELZ AND DR. JACKSON.

The cause of death in anaphylactic shock has been supposed to vary in different species of animals. In the guinea-pig fatal bronchoconstriction is believed to be produced by the final protein injection, while in dogs most observers have found the cause of death to be immediately associated with vascular derangement and weakness. Bronchoconstriction has been presumed to be almost if not entirely absent in these animals, while changes in the liver, intestine, etc., have been noted by numerous observers. Recently it has been reported that adrenalin fails to act during the deepest period of the shock while nicotine is still active.

The animals used in our experiments have been dogs sensitized either by normal horse serum or by egg albumen. Preferably we have used three injections of protein of about six to ten cubic centimeters each and injected subcutaneously at intervals of about five days to produce sensitization. After twenty-one to thirty days the animals were etherized, pithed (brain and medulla) and arranged for recording the carotid blood pressure and the extent of contraction or relaxation of the bronchioles. For this latter purpose we have used an aspiration method in which the chest is held firmly expanded but closed off from the external air except by communication through two tubes. One of these tubes serves as an adjustable inlet or by-pass and carries a screw clamp. Out of the other tube air is intermittently aspirated and thus the lungs are inflated. Between the aspirations the lungs collapse from their own elasticity, or by bronchial contraction. Comparative measurement of the amount of air entering or leaving the lungs at each inspiration or expiration (under constant and regular pressure of aspiration) is recorded by means of a tambour connected with a side tube of the tracheal cannula and writing on a smoked drum. Injections of protein were made into the external jugular vein by means of a large syringe. Eight to ten cubic centimeters were used for the final injections.

We have found that under these conditions an exceedingly profound and fatal bronchoconstriction

is produced. Atropin will neither prevent nor remove this constriction in a highly sensitized animal. Adrenalin frequently will save the animal if injected *early*, before the bronchial spasm has reached its greatest intensity. After the spasm is thoroughly developed no drug so far tried will cause dilatation. And forcible mechanical dilatation for several respiratory cycles will not ease the lungs to relax when the original aspiration pressure is resumed, as would occur after the great majority of bronchoconstricting drugs. Adrenalin will act in practically the usual manner, but less intensely, if injected *early* in the shock, before a profound asphyxia has developed. After the asphyxia has become intense adrenalin is no longer, or only feebly, active. This is certainly mainly due to asphyxia, and perhaps not to any specialized specific action of the anaphylactic processes, for practically identically the same phenomena can be seen after injection of a number of the opium alkaloids. In fact, in dogs, the bronchial and blood pressure changes in anaphylactic shock more closely resemble those produced by drugs like heroin or codein than they do the symptoms following any other substance with which we are acquainted. Ergamin (histamin) and codein are both active to practically their normal extent after an animal has recovered from anaphylactic shock. There is no changed susceptibility of a sensitized animal (horse serum) to injections of pituitrin. So far as experimental evidence can demonstrate it seems certain that in highly sensitized spinal dogs, asphyxia produced by acute bronchoconstriction may readily be the cause of death.

Various investigators have from time to time attributed the changes occurring in acute anaphylactic shock to certain changes taking place in the liver. Weil has especially emphasized this point in a long series of experiments. In order to obtain further insight into the problem we have clamped off the aorta, inferior vena cava and azygos veins above the diaphragm. The mammary arteries and veins were also occluded. Under these conditions it was found that injection of protein into sensitized spinal dogs by way of the external jugular vein produced profound bronchoconstriction and a typical fall in blood pressure. Evidently the liver had nothing to do with these reactions which occurred exactly as in the intact animal.

DISCUSSION

DR. DOCK: The figures showing the dosage remind me of an idea occasionally expressed and one that may be worth commenting on. The small dose capable of producing symptoms has led many people to think that homeopathy has a confirmation in this. A glance at Dr. Jackson's figures shows that there is no basis for such a conclusion. The normal original homeopathic doses were expressed with thirty places of decimals using one grain in the beginning. High dilute homeopaths went as far as two hundred places of decimals. When we consider that the drugs used are inert in large doses, for example, sodium chlorid or charcoal, the fallacy of the claim is still very striking.

TERTIARY SYPHILIS OF THE CERVIX UTERI WITH A REPORT OF A CASE.—By DR. OTTO SCHWARZ.

It was noted in reviewing standard works in gynecology that the subject was almost entirely neglected. The literature on the subject was also found to yield comparatively little information; this was true with exception of a few monographs of which Oppenheim's in 1908 and Gellhorn's and Ehrenfest's in 1916 are particularly worthy of mention. Oppenheim first describes the lesion both in the gross and microscopically, and takes up thoroughly the differential diagno-

sis. Gellhorn and Ehrenfest review the literature and quote twenty-one cases collected from the literature, and report five observations of their own, some of which in my opinion are somewhat doubtful.

The frequency or infrequency of the lesions is yet to be established. Fournier is quoted as stating that he sees one-half dozen cases of tertiary syphilitic lesions each year. This seems a rather broad statement, particularly in the face of a recent statement from Dr. Cullen of Baltimore, that he, himself, and also his associates at the Johns Hopkins have had no experience with the lesion up to date. In the future, the more careful working up of all suspicious cases might clear up the question of the frequency or infrequency of the lesion.

The patient in my case was a woman 35 years of age who has four living children. Her menstrual periods have been regular, but for the last few years has flowed ten days each period and rather profusely. A bloody vaginal flow was almost continuous for seven weeks previous to admission and on the day before admission patient lost about a pint of blood. Examination showed a cervix, which was enlarged twice normal size, no ulceration, generally indurated, not tender and freely movable. Body of uterus, adnexa, parametria, all normal. Cervix bled freely on manipulation. Patient was curetted and tissue removed from several places in cervix. Wassermann, positive, two plus. Sections were stained for tubercle bacilli, which were negative; emulsion from tissue injected into guinea-pigs; the pigs failed to develop tuberculosis. Histologically the cervix showed a diffuse gummatous infiltration, which consisted chiefly of epithelioid cells and small round cells; occasional plasma cells were seen. Giant cells were numerous. The lesions were particularly marked around the blood vessels and in many instances the blood vessels' lumina were entirely obliterated. There was a tendency in places for the lesion to appear in the form of tubercles some with giant cells; none of these areas showed any cessation. Spirochetes were not found in sections stained by the Levaditi method. Prompt vigorous antiluetic treatment was started, and in two months' time the cervix was entirely healed, almost normal size, and normal in all other respects.

DISCUSSION

DR. GELLHORN: I have been intensely interested in this case. It is well observed and well presented and deserves a full consideration. Time, however, will not permit me to touch on more than two points. These very beautiful pictures of Dr. Schwarz represent an early stage of gumma. I have examined five gummata of the cervix, but only in one did I find pictures identical with those shown tonight. This was a very early gumma which had not yet ulcerated. In this early stage we find giant cells and lymphocytes with plasma cells. As soon as ulceration occurs—and this occurs sooner or later in all cases—giant cells seem to disappear, and in the granulosomatous tissue we find polymorphonuclear cells which indicate that an adventitious invasion of bacteria has taken place. There must be spirochetes somewhere in the peripheral portions of gummata, but it seems a hopeless task to find them. I succeeded in locating spirochetes in the tissues of a secondary ulcer of the cervix, but two months later when the lesion had developed into a gumma, I could no longer find them. Dr. Schwarz seems to think that the diagnosis of gumma of cervix and the differentiation from tuberculosis depends in the last analysis on the histologic examination. I can not subscribe to this. The microscopic picture of gumma is not pathognostic; it should be taken in conjunction with the history, the outcome of the Wassermann, the presence of other signs of syphilis, and last, but not least, the result of specific treatment.

Dr. Schwarz is inclined to underestimate the frequency of syphilis of the uterus. Six years ago I knew nothing whatsoever about uterine syphilis. Since then, Dr. Ehrenfest and I have seen between forty and fifty cases in various stages of the disease. We recognized them largely because our interest and attention was focalized on this disease. When all gynecologists will be on the lookout for it, our previous ideas regarding the rarity of uterine syphilis will be revised.

4. AN AUTOMATIC AND BLOODLESS METHOD OF RECORDING THE VOLUME FLOW OF BLOOD.—By DR. GESELL.

An automatic and bloodless method of recording the volume flow of blood was described.

With this method, the blood, without coming in contact with any foreign substance, is measured as it flows through a vein on its way to the heart.

The blood to be measured is led into a large vein. This vein, serving as a reservoir, is placed in the trough of the volume flow recorder.

By means of solenoids and electrical contacts operating a cut-off, and an emptying plate, the vein automatically fills and empties, the blood flowing on to the heart.

The frequency of filling and emptying varies in direct proportion to the volume flow of blood, and is recorded by a signal magnet in circuit with one of the solenoids.

The capacity of the vein lying in the trough may be varied mechanically by raising or lowering the cut-off contact. This adjustment permits the adaptation of the instrument to different rates of blood flow.

The method may be used to measure the volume flow of blood from a number of tissues. Its full application, however, has not yet been worked out.

The advantages of the method are: (a) by calibration of the vein the procedure is made quantitative without the usual direct measurements of the blood; (b) it is automatic and therefore requires very little attention; (c) it is bloodless and therefore does not require the use of anticoagulants; and (d) it may be used over long periods of time without affecting the condition of the animal.

Forty-Ninth Meeting, March 11, 1918

1. EXHIBITION OF CASES.

A. A CASE OF BANTI'S DISEASE.—By DR. O'DONNELL.

B. PRESENTATION OF A CASE OF DIABETES INSIPIDUS.—By DR. CLAUSEN.

This case is presented because the malady is rare and because the treatment is new. The patient is a boy of 9½ years, who was referred to the Children's Clinic because of his great thirst and large urinary output. The family and past history are negative. The present illness began in August, 1917; polyuria, polydipsia, and slight weakness were noted. Physical examination shows an essentially normal boy. There are no features suggesting pituitary disease excepting a polyuria of 6 to 7 liters per day. The roentgen ray of the skull shows a small sella turcica and convolitional atrophy. Blood and spinal fluid have normal cytology and serology, excepting for a positive complement fixation of the serum for tuberculosis. The lesion could not be found by physical examination or roentgen ray. Kidney functional tests were normal.

The polydipsia could be controlled by a strong voluntary effort for about twelve hours.

Injections of pituitrin, the extract of the posterior lobe and pars intermedia of the hypophysis cerebri, invariably caused marked reduction in urine and

thirst, evident in half an hour, and persisting from twelve to twenty-four hours. The specific gravity of the urine rose from 1.001 to 1.020, and the daily output fell from 7 liters to about 2. The dose was 0.25 c.c. to 1 c.c., once a day. Given by mouth the extract was quite inactive. The hourly output of chlorides and of calcium invariably was much reduced for several hours after the injection; that of the nitrogenous constituents (urea, uric acid, and creatinine) showed sometimes a diminution, but usually little change. There was never an increase.

DISCUSSION

DR. SACHS: Has this boy been running a sub-normal temperature? Have you tested his cerebrospinal fluid to see if it contained substances which pointed to hypopituitarism?

DR. DOCK: Was there any effect on the diabetes resulting from the spinal puncture?

DR. BROOKS: What kind of pituitrin was given, whether the surgical or that used in obstetrical cases?

DR. CLAUSEN, closing: Spinal puncture had no effect. The surgical pituitrin was used. The boy's temperature was about normal. We have not tried the cerebrospinal fluid.

C. A CASE OF HEMOLYTIC JAUNDICE.—By H. ANDERSON.

Patient is a well built, fairly well nourished, white male, 18 years old. Family history is unimportant. He gives an indefinite history of two attacks of malaria, four and one and one-half years ago. After the last attack he noticed an enlarged spleen, which was diagnosed as malarial spleen. In April, 1917, he first noticed a yellow tint of the skin and sclera. Between September, 1917, and his entrance into Barnes Hospital in February, 1918, he has had six attacks of epigastric pain with increase in intensity of jaundice. Between the attacks the jaundice is only slight. The attacks were all similar in character, the patient says, to that observed here in hospital. The attack is introduced by a short period (a few hours) of nausea and uncomfortable fulness in epigastrium. This is followed by pain in epigastrium after which moderate tenderness in this region and right hypochondrium. The pain is described as of a drowsy, gnawing, cramping character. The whole attack lasts two to three days. It is associated with a moderate rise in temperature (101-102 F.). During the attack the color of the skin changes from that of a faint yellow to a bright canary yellow. There is no itching of the skin. He has lost about 25 pounds during the last year.

Physical examination of head and neck, chest and heart shows no abnormalities except the color of the skin. On admission the liver extended 2.5 cm. below costal margin. Gallbladder is not palpable. The liver edge is palpable, smooth, tender. The spleen is greatly enlarged, splenic dullness extends from sixth interspace in midaxillary line downward and obliquely over abdomen toward a point 2.5 cm. above umbilicus and 3 cm. to left of midline. On palpation the spleen is firm with a smooth, thick edge, somewhat tender.

After the attack the liver did not extend below costal margin, and the spleen was considerably diminished in size, although it was always greatly enlarged. During the attack the feces were clay colored, pasty with only very faint reaction when tested for bile (Schmidt's test). After the attack the feces were darker, of brown color with strong positive reaction for bile. The urine contained bile during the attack, later it was bile free, but at all times of an amber color, normal specific gravity with no albumin. Four days after the attack two small (0.5 cm.) concretions, irregular, of black color with yellow

low nodules were found in the stool. They crumbled when dried. They gave positive reactions in tests for bile pigment and cholesterol. The blood shows a moderate anemia: 70 per cent. hemoglobin (Sahli), 4.2 million red and 7,000 white blood cells. There was marked anisocytosis, slight polychromatophilia. There were a few nucleated red cells. The test for the fragility of the red blood cells was done with deplasmalized and washed cells and gave a minimal resistance of 0.62 per cent. NaCl and a maximal of 0.37 per cent. (normal: 0.47 and 0.30).

The moderate anemia, the constant jaundice with periods of intensification, and the large spleen, together with the lowered resistance of the red blood cells toward laking, place the case in the group of hemolytic jaundice. The lack of similar cases in the family and particularly the absence of any symptoms until one and one-half years ago will classify it as acquired hemolytic jaundice. The definite changes in the bile contents of urine and feces associated with the attacks together with the two concretions found in the feces make highly probable the diagnosis of a secondary obstructive jaundice.

DISCUSSION

DR. DOCK: This is a case of hemolytic jaundice associated with cholelithiasis. On account of that, when the patient came into the ward, we carried out the treatment for obstructive jaundice, giving cold enemas, sodium phosphate, etc., and during that time the patient improved. We are trying to get the patient in condition where operative chances will not be prejudiced by the blood condition. Operation in these cases should be recommended, provided the patient understands the procedure.

2. EFFECT OF PANCREATIC EXTRACTS ON A CASE WITH PANCREATIC DEFICIENCY.

—By H. H. SHACKELFORD.

3. PROTEOSE INTOXICATIONS AND INJURY OF BODY PROTEIN.*—By DR. J. V. COOKE.

A very toxic proteose-like substance not present in normal intestines has been isolated from the intestinal contents in intestinal obstruction and from closed intestinal loops. When injected intravenously in dogs this poison causes the acute clinical reaction which accompanies intestinal obstruction and may be fatal in a few hours. The injection of sublethal doses causes a marked rise in urinary nitrogen excretion which persists for several days and is accompanied by diuresis and loss in weight. The nonprotein nitrogen of the blood is also considerably increased. These phenomena must manifest an immediate and rapid increase in autolysis of body protein.

Metabolism experiments on dogs with simple intestinal obstruction and closed loops of intestine show that this intoxication is accompanied by a high nonprotein nitrogen and a very marked increase in the urinary nitrogen accompanied by diuresis. It was noted that by rendering an animal tolerant to the poison by several injections of proteose, he was able to resist the intoxication of a long closed loop of intestine for five weeks, and at the end of that time the injection of a lethal dose of proteose intravenously was practically without effect.

Metabolism experiments on animals with sterile (turpentine) and infected (staphylococcus) subcutaneous abscess, pleuritis, peritonitis and pancreatitis—the last lesion being excited by the injection of bile into the pancreatic duct—show a striking analogy between these conditions and those characteristic of poisoning by the injection of proteose. The reaction following sterile and infected inflamma-

tions is indistinguishable. All are evidently accompanied by a great increase in tissue destruction.

The sterile inflammatory processes studied are true nonspecific inflammations. One need not consider bacterial toxins, hypothetical endotoxins or specific reactions. A local chemical injury of tissue is followed by a general reaction on the part of the body due to the products absorbed from the area of injury and inflammation. The substances responsible for the general reaction are almost certainly formed from body protein by autolysis, and autolytic ferments are prominent in the inflammatory area. We have been able to isolate toxic proteose-like substances also from inflammatory exudates. There seems to be no doubt that the absorption of certain toxic split products from such an area causes a variety of reactions—leukocytosis, fever, loss of weight, etc. The rise in nitrogen output reaches as high a level in a dog with a sterile abscess as with a staphylococcus abscess. From the clinical signs and from the nitrogen metabolism no difference can be detected between an abscess due to turpentine and an abscess due to staphylococci. We must conclude, therefore, that the same type of protein injury and autolysis in the body is produced by the sterile inflammatory reaction as by the bacterial reaction.

It is assumed that the primary effect of the chemical agent or of the bacterial growth in the tissues is local cell injury and necrosis. This injured cell protoplasm undergoes prompt autolysis with escape of toxic protein split products. These toxic protein split products may be in part at least of the proteose group and are absorbed into the circulation, producing the familiar general reaction.

The injury of body protein is obvious from the great increase in elimination of nitrogen in the urine, and the injury of body protein appears to be the same in sterile and in bacterial inflammation. The injurious agent in the sterile inflammation must be derived from the host protein, and we may assume with safety that much of the injurious material emanating from a septic inflammation must come from the host protein rather than the bacteria.

Nonspecific intoxication must account for the sterile reactions described. Septic inflammations show the same acute reaction and injury of body protein. The deduction is obvious—that a great part at least of the reaction in septic inflammation is truly nonspecific and results from the primary injury of the host's protein and cell autolysis.

DISCUSSION

DR. BROOKS: We have been interested for some time in the problem of proteose intoxication following intestinal obstruction.

The first point I would make is that the term proteose intoxication is unfortunate since it implies that the only, or at least main, toxic substance involved is a proteose. Our experiments show that in the decomposition of the protein substances in a loop of obstructed intestine there is a series of toxic substances formed, some of which have the chemical characteristics of the higher proteins and others which simulate the proteoses and peptones. For example if a long isolated obstructed loop of intestine is produced in a dog, the animal may live for three or four weeks and there will accumulate in the lumen of the isolated obstructed loop a large quantity of very toxic material. From this material may be isolated both coagulable and noncoagulable toxic proteins. The amount of the toxic substances which do not coagulate on boiling increases with the duration of the experiment. In isolated obstructed loops of intestine of twenty-four to forty-eight hours no noncoagulable toxic substances are found and yet the loop content is toxic.

* This work was done in collaboration with Dr. G. H. Whipple in the University of California.

In regard to influence of bacteria on the production of these toxic substances it has always been our idea that the toxins were produced by the bacteria splitting protein material.

As to the experiments in producing immunity which Dr. Cooke reports, our experiments have given different results. We have been unable to produce in an animal any demonstrable degree of tolerance to these toxins. Animals vary in their reaction to the toxins enough so that no conclusions can be reached from a few isolated experiments.

DR. COOKE, closing: I think one gathers from the literature that the reason some organisms are supposed to have endotoxins is that no toxin can be demonstrated which is soluble although there is some toxicity in such bacterial extracts after autolysis or mechanical breaking down of the bacterial cells. This toxicity may be due to the liberation of products split from the bacterial protein. I am perfectly sure that no one has isolated enough "endotoxin" to give the remarkable toxic reaction which follows the injection of proteose.

It is probably true that there are other toxic elements in a closed loop besides the proteose we have studied, but it is our belief that this substance is responsible for many of the symptoms of intestinal obstruction. The anatomical lesions found after injection of the proteose are very like the "shock" lesions of intestinal obstruction. The fact that one may find several hundred times the lethal amount of toxin in a long closed loop, as Dr. Brooks has mentioned, is one of our reasons for believing that the toxin is not absorbed from the lumen but from the mucosa. These animals may show no signs of acute intoxication, although relatively large amounts of poison are in the loop.

The immunity or tolerance for the poison we have demonstrated frequently enough to make us certain such a tolerance can be induced in dogs. There may have been some variation in the susceptibility of the animals Dr. Brooks used, or it may be that the tolerance is better obtained when one uses the purified proteose. One animal, which was "immunized" rather highly, merely vomited once when given a dose of proteose which killed the control animal in four hours.

4. MOVING PICTURES.—By DR. K. C. PEACOCK.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at Savannah, Mo., Wednesday evening, March 20, 1918, with forty-nine members present; the president, Dr. Daniel Morton, in the chair.

After listening to an address by the mayor and the superintendent of public schools and partaking of a very bountiful dinner, the scientific program of the evening was begun by the reading of a paper by Dr. L. J. Dandurant on "Intestinal Obstruction." The paper was discussed by the following members: Drs. Spencer, Conrad, Bell, Meyers, Colby, Willman, Ladd, Farber and Potter. Discussion closed by Dr. Dandurant.

The applications for membership from Dr. Jordan E. Ruhl and Dr. William Henry Bailey received their reading and were referred to the board of censors for investigation and report.

Owing to the lateness of the hour, the papers scheduled to be read at this meeting by Drs. H. L. Delamater and T. P. Scott were postponed to the next meeting.

A rising vote of thanks was extended to the ladies of the Red Cross chapter for their entertainment and the meeting adjourned.

Meeting of April 3

The regular meeting of the Buchanan County Medical Society held in the Assembly Room of the Public Library Building, Wednesday evening, April 3, 1918, the president, Dr. Daniel Morton in the chair. Thirty-three members were present. The minutes of the previous meeting were read and approved.

On motion of Dr. Minton, seconded by Dr. Conrad, the following resolution was adopted:

Resolved, That the president appoint a man in each special line of work, these to constitute a committee to organize the volunteers into a staff for the purpose of rendering free service to the American Red Cross Home Service.

This action was taken in response to a letter received from William E. Spratt, secretary of the St. Joseph Chapter of American Red Cross. Thereupon the chairman named the following members to constitute this committee: Internal Medicine, Dr. Carle; General Surgery, Dr. Conrad; Obstetrics, Dr. A. L. Gray; Nervous Diseases, Dr. C. R. Woodson; Genito-Urinary Surgery, Dr. Bansback; Eye, Ear, Nose and Throat, Dr. Minton.

It was moved by Dr. Spencer, seconded by Dr. Leonard, that this society indorse the amendment to the constitution of the Missouri State Medical Association, which is to be voted on at the next annual meeting in May, 1918, Article VIII, Section 3, to read as follows:

The president, vice president and councilors shall be elected by the House of Delegates, but no delegate shall be eligible to any office named in the preceding section, except that of councilor, and no person shall be elected to any office who has not been a member of the Association for the previous two years.

Motion carried.

On motion of Dr. Conrad, seconded by Dr. Leonard, the following resolution was adopted and the secretary was instructed to deliver a copy to the newly elected mayor and the president of the board of health.

Resolved, That the Buchanan County Medical Society at their meeting held April 3, 1918, unanimously recommend the retention of the present health officer of St. Joseph.

The following committee was appointed by the chairman to draw up a set of resolutions on the death of Dr. Herbert Lee: Dr. P. I. Leonard, Dr. J. F. Owens, Dr. O. G. Gleaves.

The censors reported progress but requested additional time on their report on the application of Dr. J. E. Ruhl and Dr. William Henry Bailey. Application for membership by Dr. Chris M. Sampson received its first reading and was referred to the proper committee for their investigation and report.

The remainder of the evening was taken up by an address by Major W. H. Luedde, secretary of the State Medical Defense Committee.

Following the ceremony of reading the names of our members on the Roll of Honor who have answered the call to duty the society adjourned.

W. F. GOETZE, M.D., Secretary.

CARROLL COUNTY MEDICAL SOCIETY

The Carroll County Medical Society met in the court house at Carrollton, March 13, 1918. The program consisted of reports of cases, followed by some very interesting discussion.

In order to bring out a full attendance it was decided to have a banquet at one of the near future meetings. Probably when a "good feed" is promised they will be there.

The following program was arranged for the April meeting:

Paper by Dr. E. H. Musson, to be discussed by Dr. Boss Brown.

Paper by Dr. O. R. Edmonds, to be discussed by Dr. William D. Colby.

E. E. BRUNNER, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met at the Snapp Hotel in Excelsior Springs, Monday evening, March 25, with a good attendance, Drs. Remley and James of Lawson visiting.

After the routine business had been transacted, the society took up a symposium program, with Dr. J. H. Rothwell of Liberty leader; the subject, "Puerperal Infection." Dr. Rothwell led out with the etiology and prophylaxis, drawing on numerous cases from his practice to make the topic of extreme interest. Following Dr. Rothwell was Dr. Wallace on surgical measures; Dr. R. E. Sevier related a case that recovered; Dr. Suddarth spoke of the pro and con of pituitrin; Drs. Mulligan and Goodson reported cases, and Drs. Gaines and Clark described "two cases that didn't."

This was a home meeting. The writer has never seen the society in so splendid and harmonious organization. Every member is loyal, and every man is there with the goods when called on.

In this connection I may say that Dr. Woods of Smithville is so enthusiastic that he has paid his dues twice for this year!

J. J. GAINES, M.D., Secretary.

GRUNDY COUNTY MEDICAL SOCIETY

Grundy County Medical Society met in regular session at 7:30 p. m., at the Trenton Hotel in Trenton on March 5, 1918, Dr. J. A. Asher, president, presiding.

Before going into formal session the members participated in a turkey banquet. The elegant spread put every one in a very receptive frame of mind for the short program which followed.

A scientific paper entitled "Appendicitis" was read by Dr. G. E. Moore of Trenton. The society was a unit in praise of this contribution.

Dr. W. D. Fulkerson of Trenton threw every one into fits of laughter when he read a poem of humorous content. This poem is easily in a class with the productions of James Whitcomb Riley.

The discussion was informal and general and all those present pronounced the meeting the most enjoyable and instructive held for many months.

There being no further business, the society adjourned to meet again, April 3, 1918.

O. R. ROOKS, M.D., Secretary.

PEMISCOT COUNTY MEDICAL SOCIETY

Pemiscot County Medical Society met in the Commercial Club Rooms, Caruthersville, Tuesday, April 9, with the following members present: Drs. Hendrix, Lutten, Hudgins, Byers, Trautmann, Swearingen and Cooper; Dr. D. W. Metcalf and wife as visitors.

An interesting and beneficial discussion of variola and varioloid was made; a favorable opinion of the Child Welfare work under the Woman's Committee of the Council of National Defense, was expressed and the plans will be made at the next meeting.

The Society approved of the proposed amendment to Article VIII, Section 3, as follows: That the House of Delegates elect members to office even though such members may not be present at the session.

Dr. Metcalf proposed the erection of a hospital by subscription from the citizens of the county, the hospital to be open to the services of the physicians of the county; also his wife, a graduated nurse, to start a school for nurses.

Discussion of the Auxiliary Defense Committee was made and it was found that we required only two more physicians to fill our quota. Our full number had applied for commissions but some were rejected. The subject will be further considered at the next meeting.

On motion adjourned until the first Tuesday in May.

L. E. COOPER, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The regular meeting of the St. Louis County Medical Society was called to order at 3:45 p. m. by the president, Dr. Reynolds. Present were Drs. Carter, Dmavant, Jones, Pritchard, Reynolds, Westrup, Sutter, Brossard and Conway. The minutes of the two previous meetings were read and approved.

Replies from members of Congress to letters written them by instruction of the society at its last meeting, urging their support of legislation pending toward raising the rank of medical officers in the United States Army, were read and ordered filed.

A letter from the secretary of the state medical association advising of the proposed amendment to the constitution by changing Sec. 3, Article VIII, was read and ordered filed.

A letter from Lieut. J. H. Armstrong at Camp MacArthur, Waco, Texas, describing conditions of medical army life at that cantonment, was read and ordered pasted in minute book to be a part of the permanent records of the society.

A communication from the Massachusetts General Hospital, offering a course of weekly clinical reports of cases from the institution to form a basis for study and discussion, was read by Dr. Carter, and on motion duly carried, the secretary was directed to remit \$5.00 for the same.

A motion was made and carried that these reports be turned over to the Committee on Programs to be presented for discussion and study as may be most appropriate in its judgment to the needs of the society. The president announced that the Committee on Program had decided to call on each member of the society for a paper to be read on a subject to be selected by himself and at a time best suited to his convenience. The following members promised papers: In April, Dr. Reynolds; in May, Dr. Sutter; in June, Dr. Brossard.

Dr. Jones asked the experience of members in the use of sodium cacodylate in syphilis, and a general discussion of the subject followed.

Meeting of April 10

The meeting of the St. Louis County Medical Society at Webster Groves, April 10, was called to order at 3:45 p. m. by President Reynolds. Present: Drs. Reynolds, Dmavant, Sutter, Pritchard, Cape, Jones, Miles, Conway. Minutes of the previous meeting were read and approved. A communication from the New York Academy of Medicine inquiring as to the effect of the war on general medical and hospital practice in the county was read.

Communications from the Woman's Committee of National Defense (Mo.) were read regarding child welfare plans for the ensuing year. After a short discussion they were ordered filed pending fuller information as to exactly what was required of the Society in the way of cooperation.

Case reports from the Massachusetts General Hos-

pital were looked over by the members present and were ordered distributed by the committee among the members as they judged best.

Dr. Reynolds read a report on 1,506 cases of obstetrics which have occurred in his practice without the loss of a mother.

A motion carried to direct the secretary to send flowers to our fellow members, Dr. Carter, now sick in a St. Louis hospital.

On motion duly carried the president appointed the following named members on a committee to prepare and send to the families of our two recently deceased members, Drs. Berry and Thurman, appropriate resolutions of condolence and respect, copies of same also to be sent *State Medical Journal* for publication and spread on the minutes of the Society: Drs. Cape, Jones and Conway.

On motion a vote of thanks was tendered Dr. Reynolds for his interesting paper.

A. CONWAY, M.D., Secretary.

WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society met at Greenville on March 26 with Dr. P. P. Burton, president, in the chair. The following members were present: Dr. P. P. Burton, president; Dr. R. J. Owens, secretary, and Dr. G. W. Toney.

The minutes of the last meeting were read and approved. Application for membership by Dr. J. F. Wagner of Greenville was presented.

A communication from Dr. E. J. Goodwin, relative to a proposed amendment of the constitution of the state medical society which was introduced at the sixtieth annual session of the state medical association held in Springfield, May, 1917, by Dr. C. B. Clapp of Moberly, authorizing the House of Delegates to elect members to office even though such members may not be present at the session. A motion was made and carried indorsing the proposed amendment, and the secretary was instructed to write the state secretary informing him of such action.

A case of tetanus was reported by Dr. R. J. Owens. The discussion by Drs. Toney and Burton was instructive. Dr. Toney also discussed the treatment of infected wounds, and discussion on other topics was a source of much valuable information.

The meeting closed to meet at Mill Spring the last Tuesday in April, it being the 30th day of the month.

R. J. OWENS, M.D., Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society met in Niangua in the office of Drs. Williams and Schlicht, March 20. The meeting was called to order by the president, Dr. Schlicht. The following members responded to roll call: Drs. Good, Highfill, Williams, and Schlicht. Dr. J. P. Werner was a visitor.

Dr. Highfill reported a case of dementia, and Dr. Good an interesting case of orchitis.

Dr. Williams made a talk on the care of men that have been exposed to syphilis. He said they should be put under quarantine and a record made of each case so as to stamp out this disease.

Dr. Williams of Niangua was elected secretary pro tem. until the next annual election, in the place of Dr. J. R. Bruce of Marshfield who has been called to active service in the Army.

Dr. J. P. Werner of Marshfield placed his application with the society for membership.

The next meeting place will be at Fordland, June 19. A business meeting will be held in the morning and an open session in the afternoon for the public.

D. A. WILLIAMS, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

SHOTGUN NOSTRUMS.—As the soldier of today uses a rifle instead of a blunderbuss, so the modern physician uses single drugs rather than shotgun mixtures. There are many types of "shotgun" nostrums. Some are dangerous, as in the case of "Bromidia"; some are preposterous therapeutic monstrosities which excite the contempt of educated physicians, as in the case of "Tongaline"; some are merely useless mixtures of well known drugs sold under grotesquely exaggerated claims, as in the case of "Peacock's Bromides." It is impossible to determine from the published formulas just how much hydrated chloral and potassium bromide Bromidia contains, but it is probable that there are about 15 grains of each of these two drugs to the fluidrachm and variable amounts of Indian cannabis and a small amount of either extract or tincture of hyoscyamus. Bromidia is a distinctly dangerous mixture for indiscriminate use, particularly so if the advertising creates the impression that in it the chloral hydrate has been deprived of its untoward effects. Tongaline is said to consist of tonga, *cimicifuga racemosa*, sodium salicylate, colchicum and pilocarpin. This jumble of drugs would be merely ludicrous, if anything that degrades therapeutics could be considered so lightly. Peacock's Bromides is said to consist of the bromides of sodium, potassium, ammonium, calcium and lithium. The exploiters claim superiority over extemporaneously prepared mixtures because of the absence of contaminating chlorids said to be present in commercial bromids. The truth is that the chlorids are used as antidotes in bromid poisoning. Bromidia, Tongaline and Peacock's Bromides have been the subject of reports of the Council on Pharmacy and Chemistry (*Jour. A. M. A.*, March 2, 1918, p. 642).

SOME MISBRANDED NOSTRUMS.—"Notices of Judgment," reporting prosecutions for misbranding under the Federal Food and Drugs Act, have been issued for the following: Hayseen's Sure Goitre Cure Balsam, a solution of potassium iodid in water, sugar and alcohol. Hayseen's Sure Goitre Ointment, containing petrolatum and potassium iodid.—MacDonald's Atlas Compound Famous Specific No. 18, consisting essentially of sodium sulphate, sodium bicarbonate, a laxative plant drug (apparently aloes), ginger, a small amount of phosphate, a trace of alkaloid and talc.—Faucine, said to be a "warranted remedy" for piles, diarrhea, dyspepsia, scratches of horses and "good" for female complaints, "hog cholera" and other conditions.—Contrell's Magic Troche, containing a little ipecac and claimed to cure catarrh, asthma and diphtheria.—Benn Capsules contain strychnin, arsenic, iron and water soluble sulphates, and are sold as a cure for dyspepsia, backache, headache, leukorrhea, falling of the womb, etc.—Collins' Voltaic Electric Plasters, claimed to relieve pain and inflammation of the kidneys, of value in fever and ague and "good" for simple bone fracture, and would relieve many cases of bronchitis and asthma, female weakness, etc.—Mother Noble's Healing Syrup, containing vegetable cathartic drugs, iron chlorid, Epsom salt and sand.—Stuart Buchu and Juniper Compound, containing no appreciable amounts of buchu and juniper (*Jour. A. M. A.*, March 9, 1918, p. 718).

MEDeOL SUPPOSITORIES.—The Council on Pharmacy and Chemistry reports that Medeol Suppositories appear to be an imitation of Anusol Suppositories, which in 1907 were found inadmissible to New and Nonofficial Remedies. "Anusol" was formerly said to be bismuth iodoresorcinsulphonate, but after publication of an analysis in the A. M. A. Chemical Laboratory in 1909, this claim was abandoned and today Anusol Suppositories are said to contain unstated amounts of the indefinite "bismuth oxyiodid and resorcinsulphonate." "Medeol" is said to be "resorcinated iodo bismuth," but no information is vouchsafed as to the character or composition of the ingredient. As the composition of the two preparations are similar, so are also the therapeutic claims. The Council declared Medeol Suppositories inadmissible to New and Nonofficial Remedies because their composition is secret, because unwarranted therapeutic claims are made for them, because the name is objectionable, and because the combination is unscientific (*Jour. A. M. A.*, March 9, 1918, p. 719).

SODIUM CYANID.—Loevenhart, Lorenz, Martin and Malone report experiments looking toward the use of sodium cyanid, administered intravenously, as a means of stimulating respiration in threatened collapse from drowning, etc. (*Jour. A. M. A.*, March 9, 1918, p. 692).

HYPHOSPHITES FOR THE ARMY.—The purchasing department of the medical department of the U. S. Army asks for bids on three tons, in one pound bottles, of the "Compound Syrup of Hypophosphites." These six thousand bottles of a relic of past generations must be paid for and are to occupy valuable freight space in shipping to various Army posts (*Jour. A. M. A.*, March 16, 1918, p. 783).

MELUBRIN.—Chemically, melubrin is closely related to antipyrine. It acts as an antipyretic and analgesic and is said to be useful in sciatica, neuralgias and in febrile affections, and as an antipyretic in febrile affections. In Sollmann's Pharmacology, in a discussion of coal-tar antipyretics, it is stated that practical experience has shown that acetphenetidid, acetanilid and antipyrine are the most useful representatives of the group, and that all the others may well be spared (*Jour. A. M. A.*, March 23, 1918, p. 874).

THYROID HYPERPLASIA AND IODIN.—The evidence indicates that simple goiter is associated with a deficiency of iodine in the thyroid gland and that goiter formation may be prevented by iodine administration. Marine and Kimball have undertaken a study of goiter prevalence and its prevention by administration of iodine at the request of the Committee on Therapeutic Research of the Council on Pharmacy and Chemistry. In a complete census of the condition of the thyroid gland in girls from the fifth to the twelfth grades of a school population of a large community at the southern edge of the Great Lakes goiter district, they found that 2,184, or 56 per cent., had enlarged thyroids, 13 per cent. having well defined persistent thyroglossal stalks (*Jour. A. M. A.*, March 23, 1918, p. 848).

TYREE'S ANTISEPTIC AND ASEPTINOL.—Revolutionary changes in the medical sciences have been so numerous and so rapid that the general practitioner has been unable to keep pace with them. In the resulting

confusion the nostrum maker has seen his opportunity for exploiting his useless, unscientific or dangerous preparation. Because of the danger of therapeutic chaos, the American Medical Association established the Council on Pharmacy and Chemistry to place the results of therapeutic progress before the medical profession in an impartial manner. Are you availing yourself of the work of the Council, or are you prescribing proprietaries on the advice of their promoters or are you using drugs of established value? Are you prescribing "Tyree's Antiseptic," so-called, or are you using an antiseptic about which there is no mystery, for which no false claims are made and which is really effective?

Tyree's Antiseptic Powder was claimed to be a combination of "borate of sodium, alumen, carbolic acid, glycerin and the crystallized principles of thyme, eucalyptus, gaultheria and mentha." "Pulv. Aseptinol Comp." is claimed to combine boric acid, the salts of aluminum, crystallized phenol, and the active crystalline principles of thymus, mentha and gaultheria. As a twin may differ from his brother by a wart, so Aseptinol was claimed to contain *hydrastis canadensis* in addition. An analysis of Tyree's Powder showed it to be essentially a mixture of boric acid, zinc sulphate with insignificant amounts of odorous principles. In view of the misrepresentation in one case, it is difficult to understand why it should have been taken for the model of the other. These twin nostrums have been exploited by similar preposterous claims; they are utterly unfit for the treatment of the various conditions for which they are or have been recommended.

More important than the relative merits of nostrums such as these is the question whether the medical profession is going to help to perpetuate the chaotic conditions that the use of such nostrums fosters (*Jour. A. M. A.*, March 30, 1918, p. 949).

COMPATIBILITY OF PHENOLPHTHALEIN.—It is better not to combine several laxatives, but those who believe in doing this may combine phenolphthalein with drugs that can properly be prescribed in powders or pills as, for instance, calomel. Since phenolphthalein and calomel are both tasteless, they may be prescribed in powders or enclosed dry in capsule, cachet or wafer, the amount of each ingredient being estimated according to the susceptibility of each patient (*Jour. A. M. A.*, March 30, 1918, p. 950).

BARBITAL (VERONAL) CLASSED AS A POISON BY ENGLAND.—Because of frequent reports of accidents and habit formation, the Privy Council of Great Britain has classified as poisons "diethyl-barbituric acid, and other alkyl, aryl, or metallic derivatives of barbituric acid, whether described as veronal, propional, medinal, or by any other trade name, mark or designation; and all poisonous urethanes and ureides." As a result veronal will seldom be dispensed except on a physician's order, and that a record of such sales will be kept in the pharmacist's poison book. (The official name for diethyl-barbituric acid of the British Pharmacopoeia is barbitone; in the United States the official designation for this product is barbital.) (*Jour. A. M. A.*, March 30, 1918, p. 953).

BOOK REVIEWS

AMERICAN JOURNAL OF OPHTHALMOLOGY, March, 1918. Chicago.

This issue contains eight original articles of much interest to the ophthalmologists, many abstracts from ophthalmologic literature, and the usual amount of material in the regular departments of the journal.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume I, Number 4 (The Boston Number, January, 1918, W. B. Saunders Co., Philadelphia).

As might have been expected, this volume is an exceedingly full and complete collection of material from the medical clinics in Boston. Heart block and myocarditis are extensively discussed by Dr. Henry A. Christian in the clinic of Peter Bent Brigham Hospital. Altogether there are twenty clinics in this volume of 401 pages, with 128 illustrations.

A POCKET FORMULARY. By E. Quin Thornton, M.D., Assistant Professor of *Materia Medica* in the Jefferson Medical College, Philadelphia. Eleventh Edition, Revised. Lea & Febiger, Philadelphia and New York. Price, \$2.

Having gone through eleven editions and still retaining its popularity and usefulness seems to be sufficient in the nature of comment on this excellent formulary. A special feature of the work is found in the indications and annotations as to the use of the formulary.

MANUAL OF VITAL FUNCTION TESTING METHODS AND THEIR INTERPRETATION. Second Revised and Enlarged Edition, by Wilfred M. Barton, M.D., Author of "Therapeutic Index and Prescription Writing Practice," Associate Professor of Medicine, Medical Department, Georgetown University Hospital, Columbia Hospital and Washington Asylum Hospital. Published by Richard G. Badger, Boston. Price, \$2.

In this book the author has gathered in compact form and readily accessible arrangement the function tests bearing on the diagnosis of diseases of the heart, liver, pancreas, kidneys and ductless glands. Heretofore this information has been scattered widely in medical journals of many languages. The author's comments on the value of the tests are interesting and in general accord with the findings of various investigators.

TALKS ON OBSTETRICS. By Rae Thornton La Vake, M.D., Instructor in Obstetrics and Gynecology, University of Minnesota. St. Louis: C. V. Mosby Co., 1917. Price, \$1.00.

This little volume of 151 pages is the most valuable addition to the obstetric literature recently published.

It gives in precise perspective the problems the student and the man in general practice will have to solve. Sepsis, with the annual death rate of 7,500 mothers in the United States, as the author well states, is the spectre always at the elbow of the attendant in labor, and this is the subject of his first chapter, with sane conclusions.

Rectal examination with abdominal palpation and watchful observance of the fetal pulse avoids all vaginal touch—in the great majority of cases the source of infection.

The chapter on toxemia is good and the caution regarding occiputoposterior, that 80 per cent. will rotate, is a correct statement.

As may be inferred, the book is not a textbook, but if studied in connection with any of the classical encyclopedic works now available, it will help the obstetrician to find himself before he faces a tragedy.

G. C. M.

TECHNIC OF THE IRRIGATION TREATMENT OF WOUNDS BY THE CARREL METHOD. By J. Dumas and Anne Carrel. Authorized Translation by Adrian V. S. Lambert, M.D., with an Introduction by W. W. Keen, M.D., LL.D., F.R.C.S. (Hon.). Paul B. Hoeber, New York. Price, \$1.25.

This little book of a hundred pages bears the good wishes of Keen. This eminent surgeon gives the method his endorsement which alone is sufficient to carry it far with American surgeons. As in all human endeavor, he who markets a product reaps the greater harvest; so here. Though the method is essentially a chemical problem, the product of Dakin's brain, it is Carrel who brings to it the éclat which forces it to the attention of those best able to judge. This book is the essence of that presentation. It presents in the clearest possible way just what is needed to employ properly the method. Much has been written on the need of applying the solution exactly as advised by the originators. This book makes it possible for any one to follow the technic. It should be in the hands of both the nurses and surgeons wherever the Dakin solution is employed.

A. E. H.

MANUAL OF SPLINTS AND APPLIANCES. For the Medical Department of the United States Army. Report of a board convened for the purpose of standardizing certain Medical Department supplies. Lieut.-Col. Wm. L. Keller, M. C.; Major Robert B. Osgood, M. R. C.; Major Alexander Lambert, M. R. C.; Major Joseph A. Blake, M. R. C.; Capt. W. S. Baer, M. R. C., and Capt. Nathaniel Allison, M. R. C. New York: Oxford University Press. American Branch: 85 West 32nd St., London, Toronto, Melbourne, and Bombay. 1917. Price, 75 cents.

The publication of the "Manual of Splints and Appliances for the Medical Department of the United States Army" is an important step toward the standardization of the treatment of fractures. This little volume is not only of great value to military surgeons, but to those in civil practice as well. An interesting feature is the emphasis placed on traction and suspension in the treatment of fractures to the almost complete exclusion of plaster of Paris. The manual would be a very valuable book for any one treating fractures because of its simplicity in methods of treatment and its clearness of description of apparatus.

T. G. O.

FOOD FOR THE SICK. A Manual for Physician and Patient. By Solomon Strouse, M.D., Associate Attending Physician, The Michael Reese Hospital; Professor of Medicine at the Post-Graduate School, Chicago, and Maude A. Perry, Dietitian at the Michael Reese Hospital, Chicago. 12mo of 270 pages, Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$1.50 net.

Quite entertaining is this handy compend of dietetic regime in the treatment of the sick. The authors, by their practical manner of handling the subject, present a small volume designed to enlist the understanding and cooperation of intelligent patients—a factor in individual therapy so often necessary; further, by their effort to simplify and to abbreviate, the whole subject is handled in a form attractive to the physician himself who will refresh his experience and methods by an occasional chapter from this work.

Here and there in the book are precepts in which hypothesis and tradition still prevail. One wonders, for example, in the matter of various calculi whether diet has any effect whatever in their prevention or causation. Certainly any such relationship is impossible to discern clinically.

On the whole the book is excellent, for aside from setting forth good rules for guidance there is a plea through the work for individualism in their application.

J. Q. C.

DISEASES OF CHILDREN. A Manual for Students and Practitioners. By George M. Tuttle, M.D., Clinical Professor of Pediatrics, Washington University Medical School, and Phelps G. Hurford, M.D., Pediatrician, St. Louis Lutheran Hospital. Third Edition Thoroughly Revised and Enlarged. Illustrated with 47 engravings and 3 plates. Lea & Febiger, Philadelphia and New York. 1917. Price, \$3.50.

In this compact book of 600 pages a surprisingly large amount of information is to be found, the volume being of convenient size. It is wise that the authors deal almost entirely with the diseases of childhood, leaving the needed more extensive description of infant feeding and metabolism to special works on that subject, several of which are now on the market and obtainable by one who wishes to go completely into the subject.

The description of the various diseases are brief but contain the essentials. It is a relief to find a book in which the subject of treatment is confined to those few remedies which have been generally proved to be indicated. Any one who specializes in children has learned to keep away from polypharmacy.

This book is essentially for students, either before or after graduation, who wish to lay the foundation for a knowledge of the common diseases of children. It is not in competition with extensive works or with the current literature on pediatrics, but is a concise statement of the fundamentals of the subject and deserves to be read.

F. C. N.

INFANT FEEDING. By Clifford G. Grulee, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College; Attending Pediatrician to Presbyterian Hospital, Chicago. Third Edition Thoroughly Revised. Octavo of 326 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$3.25 net.

Infant feeding is such a specialized branch of pediatrics that a book devoted to this subject alone is of marked value. Frequent revisions to keep pace with recent investigations are necessary and these are possible and practical in a volume of this size. Grulee is not only an authority of recognized ability, but he has shown discrimination in his reference to the work of others, bringing into his book the research that has been proven of value and leaving out the many confusing and contradictory opinions in which the literature abounds.

To the general practitioner the subject of infant feeding is more or less of a bugbear, recalling attempts to master mathematical formulas. To such, this book of Grulee will be a pleasant revelation, for the classification and subject matter are clearly and simply presented. He treats of the feeding of the normal breast and bottle infant, of the disturbances of digestion and nutrition and of the heretofore little described parental disturbances of nutrition. The author is generally in favor of four-hour intervals in feeding, of simple milk mixtures, of basing the amount of food on the weight and digestive ability of the individual child. Common sense, wide experience, rejection of the many superstitions and empiricisms that have clung to the subject, and above all a comprehensive review of the physiology and metabolism of infants in their relation to feeding in health and disease; these are features of the book which recommend it to every physician.

F. C. N.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1917. Cloth. Price, postpaid, 50 cents. Pp. 169. Chicago: American Medical Association, 1918.

This volume contains the reports of the Council which were adopted and authorized for publication during 1917. It includes reports of the Council previously published in *The Journal of the American Medical Association* and also reports which, because

of their highly technical character or of their lesser importance, were not published in *The Journal*.

In this volume the Council discusses the articles which were examined and found to be in conflict with the rules for admission to New and Nonofficial Remedies. Among these reports are discussions of such widely advertised proprietaries as Corpora Lutea (Soluble Extract), Wheeler's Tissue Phosphates, The Russell Emulsion and The Russell Prepared Green Bone, Trimethol, Eskay's Neuro Phosphates, K-Y Lubricating Jelly, Zirato, Hepatico Tablets, Hemo-Therapin, Venosal, Surgodine and Kalak Water. A report on Iodeol and Iodagol covers 51 pages and illustrates the exhaustive investigation which the Council is often obliged to make of proprietary articles. Similarly illustrative of the Council's thoroughness is the clinical study of Biniol, a solution of mercuric iodid in oil, and the investigation of Secretin-Beveridge, made for the Council by the physiologist, Professor Carlson of the University of Chicago. The volume also contains reports which explain why certain preparations, such as Alcresta Ipecac tablets, the German-made biologic products and antistaphylococcus serum, which were described in the last edition of New and Nonofficial Remedies, are not contained in the current 1918 edition. Those who wish to be informed in regard to proprietary remedies should have both the annual Council Reports and New and Nonofficial Remedies.

NEW AND NONOFFICIAL REMEDIES, 1918, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1918. Cloth. Price, postpaid, \$1. Pp. 452 + 26. Chicago: American Medical Association, 1918.

This annual should be in the office of every physician. It lists and describes all those proprietary remedies which the Council on Pharmacy and Chemistry has examined and found worthy of the confidence of the medical profession; that is, articles the composition of which is disclosed, which are exploited truthfully and which give promise of some probable therapeutic value. The description of each article aims to furnish a statement of its therapeutic value and uses, its dosage and method of administration as well as tests for the determination of its identity and quality. Articles of similar composition are grouped together and in most cases each group is accompanied by a general article which compares the members of a group with each other and with the established drugs which they are intended to replace. The description of the individual articles and the general discussions are written by experts and furnish information of a trustworthiness unsurpassed by any other publication. The book is especially valuable to the busy physician who desires a concise and up-to-date discussion of such subjects as digitalis therapy, the newer solutions for wound sterilization, iron therapy, food for diabetics, the value of sour milk therapy and of the Bulgarian bacillus, the use of radium externally and internally, of arsphenamine (salvarsan, arsenobenzol, diarsenol) and neorsalvarsamine (neosalvarsan, neodiarsonol), of local anesthetics, and other advances in therapeutics.

In addition to this annual issue of the book, supplements are sent from time to time to purchasers. With this volume for ready reference, the physician will be able to determine which of the proprietary remedies that are brought to his notice deserve serious consideration. At least he will be justified to subject to close scrutiny those which have not met the requirements for acceptance for New and Nonofficial Remedies.

The book is sent, postpaid, for \$1. Address the American Medical Association, 535 North Dearborn Street, Chicago.

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ORIGINAL ARTICLES

TRAUMATIC RUPTURE OF THE KIDNEY*

MAX GOLDMAN, M.D., M. R. C., U. S. ARMY
KANSAS CITY, MO.

The subject of subparietal rupture of the kidney, i. e., without an external penetrating wound, has been treated frequently in the forms of exhaustive compilations by numerous writers. Some of these studies are veritable classics. Three of them stand out above the rest: Ernst Küster's, W. W. Keen's and Francis Watson's. The first deals largely with the theories upon which the peculiar pathology depends, the second elucidates the treatment of the condition, while the third takes up in detail the symptoms, diagnosis and complications.

The report here presented will, it is hoped, serve to call attention to a few of the very interesting features of this comparatively rare accident and will bear especially upon the symptoms and diagnosis of the condition in general rather than upon the pathology or treatment.

It might be of interest to review briefly some of the features of this kind of injury to the kidney. In studying the causative factors concerned in the mechanism of the trauma, one is startled by the frequency with which, in these cases, the force seems apparently inadequate to produce the extensive laceration found at operation or autopsy (Francis S. Watson, *Boston Medical and Surgical Journal*); and numerous cases are cited by various writers wherein muscular action alone served to produce more or less kidney trauma sufficient to bring on considerable hematuria. A few of these from Watson's collection will be mentioned as examples:

- (a) A man making a sudden spring backward.
- (b) A man lifting a sick woman across the bed.
- (c) A boy lifting a heavy weight.
- (d) A man carrying a heavy weight, sharply bending his body backward.

- (e) A man catching a heavy weight falling toward him.
- (f) A man carrying a heavy burden on his shoulder and bending suddenly forward.
- (g) A man dealing a sudden blow while boxing.
- (h) A young girl jumping over a hedge and suddenly bending her body forward and to one side.
- (i) A woman of 66 lifting a heavy box from a shelf.
- (j) A young woman exerting some ordinary muscular effort suffered a blood effusion into one kidney and destruction of the lower pole (Morris).
- (k) A woman was squeezed forcibly around the waist by her husband while dancing; the kidney was extensively lacerated (Voit).

By far the greatest number of etiologic factors in the cases enumerated by Keen in his exhaustive study of 118 cases out of an analysis of 155 of kidney rupture from all causes was falls from various, usually considerable heights, even without direct injury. A blow on the abdomen has been known to result in rupture of the kidney, or laceration of the kidney structure without injury to other abdominal viscera; and laceration may occur as the only result of a crushing force passing over the front of the abdomen of an individual lying on his back.

Outside of muscular exertion alone the violence usually causing the condition is a direct blow on the loin or lower ribs, as a kick, or a fall across a beam or a wheel, or the edge of a seat, as in the case about to be reported, a crushing force, such as a wheel passing over the body, or compression of the body between two or more forces.

The symptoms and signs are chiefly pain in the costo-iliac region, or in front in the hypochondriac or even in the epigastric region, in which event painful breathing or difficult breathing is observed also. Hematuria, which occurs in 91.5 per cent. of the cases and in 50 per cent. of the cases disappears in a week, is an important and often the only clinical sign. In many cases one observes striking evidences of internal hemorrhage or of shock, perirenal swelling, designated by Ransohoff as the "second primary cardinal symptom," and polyuria, anuria or oliguria. In those instances in which

* Read at a meeting of the Jewish Institute Dispensary, Kansas City, Mo., Nov. 7, 1917.

intraperitoneal lesions occur simultaneously with subparietal rupture of the kidney there are abdominal distension, tympanites, vomiting, muscular rigidity, temperature and tumor. The term "complicated cases" may be applied to this latter class. In the case about to be reported all the symptoms enumerated above were present

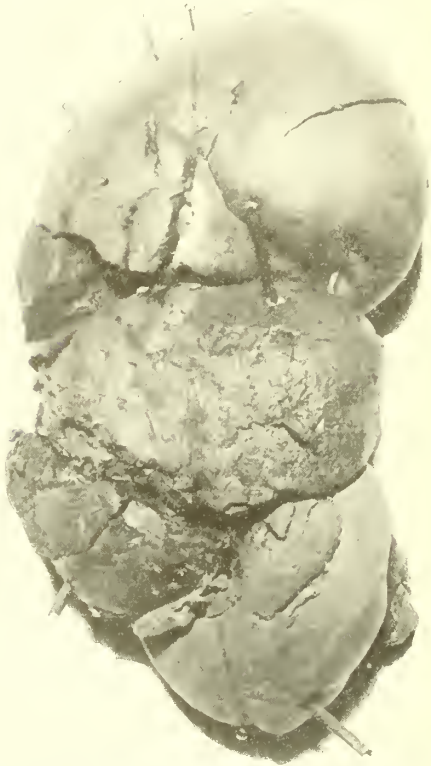


Fig. 1.—Traumatic rupture of Right Kidney: anterior view. There were five separate segments, and the pelvis was completely torn away.

except the hematuria which certainly must have existed the first few days following the injury.

In the cases without simultaneous intraperitoneal lesions, which will be designated uncomplicated, the symptoms are early in their appearance, as a rule, either immediately or in from one to two days, and last for from two to six days, whereas in the complicated cases the symptoms are progressive and become more marked later in the case. Some statistics might be of interest in this connection. In 111 cases of tumor in uncomplicated cases collected by Watson, 39 were due to perirenal extravasation of blood, 28 to traumatic hydronephrosis, 4 to hematonephrosis (very rare), 38 to perinephritic abscess, and 2 to pyonephrosis.

Absence of hematuria which, though rare, was a marked feature in the case to be here discussed, may be due either to tearing across the renal pelvis, severing of the ureter or blood vessels, disintegration of the kidney, obstruction of the outlet of the renal pelvis, or, possibly, stricture of the ureter.

The hematoma may attain a huge size, pushing the peritoneum and bowel forward with terrific tension, the force being exerted into the peritoneal cavity forward and downward. Intraperitoneal hemorrhage, though slight in the case to be presented, occurs rarely and is a most serious concurring accident. Out of 486 uncomplicated cases collected by Watson intraperitoneal hemorrhage occurred in but 20. According to the observation of Walker, it is most frequently seen in children. Suppurations of the kidney cause death in probably 70 per cent. of the fatal injuries, while anuria, though fatal in a small percentage of cases, may cause death, even when the other kidney remains uninjured. In Watson's series ten deaths were so caused. Of course, when both kidneys are lacerated anuria is more common, and in some instances recorded there was but one kidney. Küster states that recovery occurs in 70 per cent. of uncomplicated cases; that is, uncom-

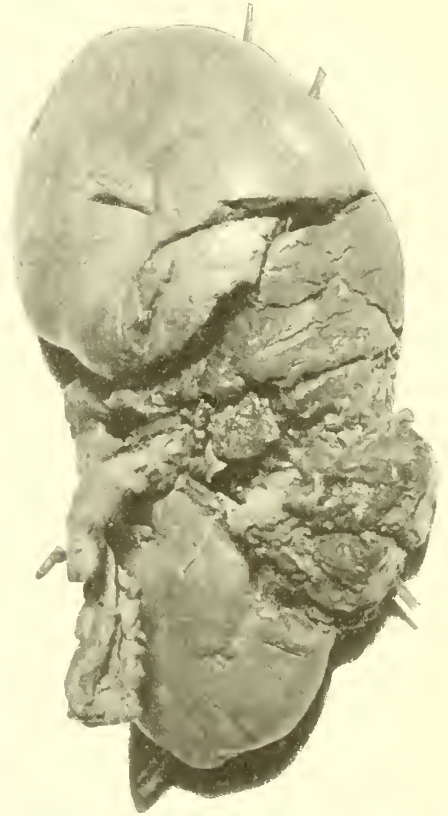


Fig. 2.—Traumatic rupture of kidney. View of posterior surface. The pelvis and a segment of the ureter are here shown.

licated by lesions of other organs or unfavorable developments in the course of the condition. In those associated with other injuries the mortality is 67 per cent. according to Watson. In Watson's collection of 487 uncomplicated cases 273 were treated expectantly with a mortality of 27 per cent.; 99 by operation other than

nephrectomy with 7 deaths, or 7 per cent., and 115 by nephrectomy with 25 deaths, or 25 per cent.

Any part of the kidney may be torn; but the hilum and that portion adjacent to it most frequently suffers; however, the most friable portion is the junction of the cortex and medulla. The tear or fracture is usually in the transverse axis of the kidney.



Fig. 3.—Traumatic rupture of kidney. Exploratory abdominal incision over the mass or trauma caused by the perirenal hematoma. Note the extent of the swelling.

Kidney injuries are comparatively rare. In one study of a series of injuries found at post-mortem there were but 10 out of 7,741 cases examined. Furthermore, the relation of renal injuries to surgical diseases of the kidney is stated by Küster as 7.8 per cent. The right is more often affected than the left, but the condition is rarely bilateral. The usual age is from 10 years to 30 years. Out of 299 cases observed by Walker 281 were male and 18 were female. Only 25 cases of this kind were admitted to the Boston City Hospital in fourteen years of records studied by Watson. Out of 2,610 autopsies made at the Middlesex Hospital between 1873 and 1883 only 12 cases were found. Considering the relative frequency of kidney injury compared with injury to other abdominal viscera following abdominal contusions, Watson published a study of 292 cases. Of these there were 89 of injuries to various abdominal organs and they were classified as follows:

	Per Cent.
Kidney	35 or 39
Intestines	22 or 23
Liver	15 or 16
Spleen	10 or 11
Bladder	4 or 5
Mesentery	3 or 3

The general management of these cases is sometimes the occasion for the display of the keenest diagnostic and surgical skill. If the injury is slight, nonoperative or expectant treatment for a short time at least may be employed. The treatment is surgical in the majority of the

cases in which shock, pain and hemorrhage or any one of these conditions enters to establish the diagnosis of extensive kidney rupture. After a study of the opinion of diverse investigators and from one's own experiences, one should formulate a standard or guide to follow, if possible, in by far the majority of the cases. The conclusions of Watson have the endorsement of a good many. These may be termed the indications for surgical interference and are:

1. Immediate severe hemorrhage, and the presence of a tumor in the loin which does not subside in a reasonable time.
2. Infection of the bladder, or infection and suppuration of the injured kidney.
3. Where there is reason to expect the previous existence of kidney tumor, stone, pyelitis or pyonephrosis.
4. When other indications for operative interference from complications are present.

In the case to be reported, the patient was a young woman, Katherine F., aged 23 years. Five days previous to an automobile accident, in which the injury occurred, she had passed what was thought to be a fetus, the result of an abortion performed a short time previously, she having missed two periods. She had nearly stopped flowing the day of the injury, April 1, 1917.

She was seated in the front seat with the driver at her left; there was a party of several in the 7-passenger machine, the storm curtains of which were drawn at the sides. When turning a curve, though the car was going at a slow rate of speed, the right rear wheels struck some rocks, and the car, sliding toward a ditch along the road turned slowly over on its side toward the right. The patient in falling from her seat to the



Fig. 4.—Traumatic rupture of kidney. Transverse lumbar incision, yielding easy access to the kidney region.

ground on the side curtain, was forced against the margin of the seat by the driver who fell over and against her; she remembers when her side struck the edge of the seat of the car. When she was picked up her chief complaint was shortness of breath and pain in the right hypochondriac region on respiration. She was taken to a house some hundred yards away and a doctor was summoned; he made no diagnosis but gave her two hypodermic injections, presumably morphin, for the relief of pain. This was at 11:30 p. m., and in consequence of the necessarily slow rate of travel in transporting her, she did not reach

her home in the city till 5:30 a. m. At 6 p. m. of the same day another physician saw her; her pain had been less severe that day, but she began to vomit frequently toward evening, some five or six times, after which the pain in the loin and in front increased. The same doctor saw her again on the evening of the second day, said she was considerably "shaken up," but that she would be all right in a few days, and asked her to report three days later at his office. On the evening of the third day she was seen by Dr. H. V. Cordry. In view of the suggestive history of her recent amenorrhea and probable abortion, he treated her expectantly until Saturday, six days after the injury, when I first saw her. She was taken to the hospital the next day and was operated on Tuesday morning, a week and two days from the time of the injury.

The symptoms that were present when I first saw her were suggestive of several conditions, and in view of a possible peritonitis following the abortion produced so recently, they were quite misleading. There was marked abdominal rigidity and tympanites; all week the temperature had been around 103 F. The pulse had been very rapid, varying from 118 to 130. She was quite pale and anemic and with the slight jaundice present suggested either a toxicosis from sepsis or a hemorrhage concealed somewhere. There was marked reduction in red blood cells and hemoglobin but no leukocytosis. There were no urinary symptoms or disturbances, and the urine was entirely negative in two examinations of catheterized specimens. There had been a slight difficulty in urinating she said, and the urine at first had been dark and cloudy in appearance.

With rest in bed and the application of ice to the abdomen and right loin her condition improved slightly and it became possible to outline an extensive swelling or tumor in the right side in front extending as low down as the iliac crest and upward beneath the ribs. Tenderness in the back was marked.

The operation decided on was an abdominal exploratory followed by lumbar incision if necessary. Dr. H. O. Lienhardt assisted in the operation. The incision in front was directly over the swelling and was of considerable length and extent. The peritoneal cavity contained considerable free blood but no clots or pus; the colon was distended and pushed tensely against the side and front of the abdominal cavity by the swelling behind it; the liver edge was intact. Having determined that there must have been a perforation of the peritoneum covering the kidney, with the preponderance of trauma in the kidney region, I closed the abdomen, leaving a small drain and proceeded with the transverse lumbar incision in order to present a free exposure of the bed of the kidney. The pathology found consisted of an extensive breaking up of the renal capsule, rupture of the kidney into at least five portions or segments, and a huge blood accumulation; these were rapidly removed in turn. The vessels were caught, clamped and ligated. The kidney pelvis which had been completely separated from the organ was found and caught, and with a portion of the ureter tied off. The cavity was cleansed with saline sponges, and the wound closed with drainage. Save for the post-operative peritoneal difficulties, and the exhaustion incident to the profound secondary anemia, the course of the patient's convalescence was splendid and the recovery was complete. Her weight at the time of the accident was 115 pounds and is nearly that much at the present time. The end-results of the condition have been more than satisfactory, inasmuch as the patient reports a complete return to normal health.

To summarize briefly: (a) This case presents a very unusual pathology in the condition known as traumatic rupture of the kidney. (b) The diagnosis was difficult in view of the history of

probable abortion, thus presenting the problem of excluding a ruptured extra-uterine pregnancy, or a possible secondary peritonitis. (c) The amount of trauma was apparently very slight and entirely out of proportion to the extensive laceration of the kidney seen at operation. (d) There was no hematuria which, ordinarily, is so prominent and valuable an aid in the diagnosis of kidney rupture, thus adding materially to the difficulty in this case of arriving at a more definite preoperative conclusion. (e) Radical surgical interference saved the life of this patient.

1222 Rialto Building.

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THE MUCOSA OF THE RECTUM AND SIGMOID COLON AS A FOCUS OF INFECTION*

HORACE W. SOPER, M.D.
 ST. LOUIS

In this paper I wish to direct special attention to infections of the mucosa of the rectal and sigmoidal regions, inasmuch as my experience reveals that such localized inflammatory processes are quite common, often escape recognition for years, and are etiologic factors in the production of systemic disease. I do not include in this report abscesses and other conditions about the anal canal and hemorrhoidal veins requiring surgical aid. Luetic, tubercular and amebic ulcerations are also excluded. This paper is limited to a consideration of the primary infections of the mucosa of the rectum and sigmoid by pyogenic micro-organisms, the resulting systemic effects, the subjective symptomatology, and finally the changes produced by direct local treatment. Fifty cases were studied, varying in intensity from mild non-ulcerative infections of the ampulla recti to severe ulcerative processes involving the entire rectum and a part of the sigmoid colon. Illustrative abstracts of case histories are here presented which may serve as examples of the various groups.

CASE 1.—Male, aged 49; height, 5 feet 11 inches; weight, 165 pounds; tuberculous family history. Chief complaints: rheumatic pains in joints and various muscles for the past two years. For five years has had irregular bowel actions, usually three or four small, inadequate passages daily. Has had dull headaches, lassitude, inability to concentrate. Eyes, ears, nose, throat, and teeth had been looked after by competent men without detecting a focal infection. Blood pressure, 152-90. Urine showed a trace of albumin, many cylindroids, indican. Wassermann negative.

* Read in Symposium, St. Louis Medical Society, March 23, 1918.

Feces: many small clumps of mucus mixed with pus cells.

Proctosigmoidoscopy revealed a very tightly contracted rectum. The mucosa of the ampulla recti was deep red, thickened, and covered with thin feces, in which were many clumps of muco purulent material. Culture showed the presence of many gram-negative bacilli, a few gram-positive bacilli, many staphylococci, no streptococci. No tubercle bacilli were found.

Treatment. Insufflation of calomel powder through the rectal tube. He improved rapidly and the feces became normal in four weeks' time. Rectum free from mucus and pus.

A month later he returned with a relapse, the mucosa showing the same sort of infection as before. The wrists and fingers were distinctly swollen. After two weeks treatment was instituted.

In this group are found the cases usually diagnosed as auto-intoxication and neurasthenia. However, sigmoidoscopy revealed that an infectious agent was responsible for the condition. Twenty cases, varying in age from twenty-one to forty-nine, were observed.

CASE 2.—Female, aged 43; height, 5 feet 8 inches; weight, 123 pounds. Two children. Chief complaints: constipation as long as she can remember. For the past ten years has had rheumatic pains and swelling of the finger joints, backache, and especially severe headaches of migrainous type, occurring two or three times a month. Recently they were so severe that codein and morphin were given hypodermically to control the attacks. Eyes, teeth, nose and throat had been carefully looked after by competent specialists. Had an operation for hemorrhoids two years ago. Her diet had been carefully regulated without any influence on the headaches. Wassermann negative. Examination of urine and blood revealed nothing abnormal. Feces showed the presence of mucus, red blood cells, and pus cells. No culture made. Smear showed presence of diplococci and staphylococci. No gonococci. No tubercle bacilli.

The sigmoidoscope disclosed the presence of a general catarrhal condition of the entire mucosa of the rectum, extending to the plicae sigmoidae. The membrane was much thickened and covered with small clumps of mucus and purulent material. The scar tissue from the hemorrhoidal operation caused considerable contraction of the anal canal.

Dilatations and daily treatment by calomel insufflations for six weeks, together with the use of oil enemata, finally produced normal, daily bowel movements, subsidence of the local inflammatory process and freedom from the attacks of headaches. No recurrence for the past twelve months.

The cases in which migrainous headaches and spastic constipation were the predominant symptoms were twelve in number. Eight showed the same striking improvement as the one described. In two cases the headaches recurred at longer intervals and were milder in type. In two the constipation was relieved but the headaches persisted.

CASE 3.—Female, aged 35; height, 5 feet 3 inches; weight, 110 pounds; single. For ten years had trouble with bowels—irregular, constipated, sometimes diarrhea after eating fruit. Severe diarrhea and cramps after taking purgatives. For the past four years has been an invalid. During this time had suffered four surgical operations: first, pus appendix; second, ovarian abscess; third, empyema of the gall-bladder; fourth, excision of gastric ulcer. Chief symptoms are almost constant occipital headaches,

pains in joints (no swelling), pains in muscles, extreme nervousness, insomnia. Blood pressure 100-80. The urine showed albumin and casts. Otherwise the kidney function was good.

Sigmoidoscopy showed a marked hemorrhagic pus proctitis limited to the ampulla recti. The entire membrane was much thickened and covered by a thick layer of bloody pus. No gonococci or tubercle bacilli were found.

Culture showed bacilli coli, staphylococci and streptococci. It required six weeks' daily local treatment of calomel powder completely to clear up the infection and restore the mucosa to a normal condition. She has remained well for the past year, gaining 20 pounds in weight and is able to resume her work as stenographer.

Ten of the case series belonged to this group. In some of them there was a probability that there had been an original infection by gonorrhoeal pus. However, the gonococci could not be isolated and the inference was that a general mixed infection had persisted. All showed sequelae such as appendicitis, cholecystitis, gastric and duodenal ulcer and kidney disease. A curious feature of this group is the tendency to hemorrhage. One case which was seen in consultation with Dr. Hugo Ehrenfest had several severe rectal hemorrhages.

CASE 4.—Female, aged 64; height, 5 feet 5 inches; weight, 112 pounds. Has suffered from arthritis deformans for twenty years. Joints of hands, wrists and shoulders affected. Has had many attacks of neuritis. The chief subjective symptoms were much intestinal gas, cramps, alternating constipation and diarrhea. Blood pressure 180-100. Heart considerably hypertrophied; general sclerosis of arteries. Kidneys showed considerable impairment, probable chronic interstitial nephritis. Feces showed small, bloody mucopurulent clumps.

The sigmoidoscope revealed an ulcerative proctosigmoiditis involving the entire rectum and 2 inches of the sigmoid. Purulent material was negative for tubercle bacilli and gonococci. Culture showed many gram-negative bacilli, many diplococci and streptococci.

It required two months' local treatment to restore the mucosa to a normal condition (insufflations of calomel three times weekly). The joints are less painful, but otherwise unchanged. She gained in weight and strength and the bowel function is good.

Seven cases were observed in which chronic interstitial nephritis and arthritis deformans were the predominant lesions. All showed much improvement in general nutrition and amelioration of the subjective symptoms with but little change in the joint conditions.

CASE 5.—Female, aged 26; height, 5 feet; weight, 95 pounds. Dates trouble from attack of typhoid fever ten years ago. Bowels much constipated. Defecation always painful, more so after laxatives. Has suffered from attacks of dyspepsia, nervous symptoms and loss of weight. Has often had low fever lasting for weeks. The examination of the urine showed a trace of albumin, hyaline casts, trace of sugar, strong indican and weak acetone reactions. Feces consisted of a small amount of fecal matter mixed with a mass of pus and blood. Wassermann negative.

Sigmoidoscopy.—The entire mucosa of the rectum and the first 3 inches of the sigmoid is involved in a severe chronic ulcerative process. The wall of the bowel and mucosa is much thickened and covered by

a thick, bloody pus. Culture showed a mixture of gram-negative and gram-positive bacilli, staphylococci and streptococci. No tubercle bacilli and no typhoid bacilli could be identified.

Roentgen-ray examination showed an absolute stasis in the transverse colon. The bismuth meal was retained here for one week. The roentgen-ray diagnosis was, therefore, an obstruction, probably in the splenic flexure.

Treatment.—Daily insufflations of calomel caused steady improvement, and in eight weeks' time the mucosa was in a normal condition. She gained 17 pounds in weight, and all nervousness and headaches disappeared. Reexamination in October last showed no return of the infection and her health was fully restored. Bowel function normal. The colonic stasis was evidently due to a spasticity at the splenic flexure, and not to a true stenosis.

This case was unique inasmuch as it followed an attack of typhoid fever. She was probably not a carrier as no cases have occurred in her family.

The consideration of these cases raises an important question: Is the inflammation limited to the rectum and sigmoid, or is the entire colon involved? In the cases here presented the return of the mucosa to a normal condition, a view of normal membrane higher than the diseased area and the absence of pus or mucus in the feces were taken as evidence that the lower colon alone was involved.

Cases of general colitis were encountered which were treated by other methods, notably autogenous vaccines. They are reserved, however, for a subsequent report.

In a considerable number of cases, not here reported, the incidence of pyorrhea alveolaris, pus proctitis and gastric or duodenal ulcer was noted. They were omitted in this paper as it was difficult to determine which was the primary lesion.

SUMMARY

1. The lower colon is frequently invaded by pus-forming organisms. The infection is mixed in character and exhibits an extreme degree of chronicity. The resulting systemic disease varies from merely nervous disturbances, headaches, and constipation to pus infection of the appendix and gallbladder, gastric ulcer, arthritis deformans and chronic kidney disease.

2. Treatment by dry powder insufflation method of Rosenberg is extremely efficacious. Calomel is the powder of choice for local use, as it adheres well to the mucosa and cannot be easily dislodged. It is non-irritant and may be applied to the sensitive mucosa of the anal canal without producing pain. There is no danger from absorption. Not a single case of systemic disturbance followed the daily use of large quantities. Finally, calomel had probably more antiseptic power than any other available powder.

3. In the search for foci of infection, the lower bowel must not be neglected. In fact, no general examination of a patient is complete without proctosigmoidoscopy.

Wall Building.

GENERAL MEDICAL ASPECT OF FOCAL INFECTIONS INCLUDING THOSE OF THE GALLBLADDER AND APPENDIX *

L. H. HEMPELMANN, M.D.
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The fact that foci of infection may result in systemic disease has been known for many years. The old masters of medicine were quite familiar with the arthritis that might follow an acute gonorrhoea and knew full well that an attack of rheumatism might be ushered in by a tonsillitis. Only within the last decade, however, has it been called to our attention, largely through the efforts of Frank Billings, Rosenow and the group of workers associated with them, that chronic, often latent foci of infection were frequently responsible for systemic disturbances.

The most common lesions which are pretty generally conceded to have a definite relationship to these foci are chronic arthritis, acute and chronic nephritis, cardiovascular degeneration and neuritis. The foci may occur anywhere in the body but their most common sites are in the tonsils, at the roots of the teeth, in the nasal sinuses, genito-urinary tract, gallbladder and appendix. The foci in themselves may cause no inconvenience and are often discovered only after painstaking clinical and roentgen-ray examination.

The practical application of these principles to the cure of the disease is usually difficult and the results are often disappointing. Many foci are frequently found and one has no way of determining which one is responsible. Usually it becomes necessary to remove all foci one after another. The teeth are roentgen-rayed and those having root abscesses are extracted or properly treated; tonsils are often removed on suspicion, the nasal sinuses are examined by a competent rhinologist and opened up if necessary, and foci in other parts of the body treated surgically; all of which is most interesting to the scientific physician but often rather hard on the poor patient.

The results are often disappointing to the patient because the disease may have produced changes in structure which of themselves precluded the possibility of a cure, as is the case, for example, in many cases of chronic arthritis deformans; or the absorption of toxins from a focus may be only one of many factors which is responsible for the disease in question, as for example when a highly strung nervous business man who has a chronic cholecystitis develops Bright's disease—the removal of the gallbladder will of course not bring the nephritis to a standstill as it was only one of many factors which resulted in the renal disease.

* Read in a symposium at the meeting of the St. Louis Medical Society, March 23, 1918.

Foci of infection are extremely frequent while the arthritis, nephritis, etc., for which they are responsible, are rather rare. It seems that nature has supplied us with an immunizing apparatus that protects most of us against the harmful effects of the absorption of these toxins and only when something goes wrong with this mechanism does harm result.

In many instances it has been possible to cultivate germs from these foci and these germs have reproduced the disease in animals thus proving their etiologic relationship. In this work the newer methods of bacteriology as developed by Rosenow and his associates has been very helpful. Of course it seemed logical to make autogenous vaccines from these cultures, but in a general way the results of this vaccine therapy have been rather disappointing.

I have been asked to discuss the effects of foci of infection in the gall-bladder and appendix on the general health. An old chronic appendicitis very frequently is responsible for reflex disturbances of gastric digestion and frequently causes duodenal ulcer by absorption of its toxins. In other cases suppurative pylephlebitis, abscess of the liver, or a general pyemia, may occur. A diseased gall-bladder is often responsible for all sorts of stomach symptoms and in a few cases cardiac irregularity, vertigo and even attacks of pseudo angina pectoris have disappeared after the gall-bladder has been drained or removed. One is often surprised at the improvement in the general health which follows an appendectomy or gall-bladder operation, a relief which seems out of all proportion to the lesion found at operation.

Recently Smithies and Percy of Chicago have reported a series of some forty cases of pernicious anemia which have been treated by massive, repeated blood transfusions together with eradication of all discoverable foci of infection including the routine removal of gall-bladder, appendix and spleen. In many cases hemolytic streptococci were isolated from the excised tissues at the Sprague Institute. They report wonderfully good results, 25 per cent. of their cases being in good condition at the present time. Of course, it must be added that all of their cases are rather recent (the first one was subjected to this line of treatment only three years ago) so that it is too early to state what the ultimate outcome will be but, nevertheless, their results are encouraging and will doubtless be watched with interest.

In my own experience I have seen a chronically inflamed appendix associated with duodenal ulcer so often that I am convinced of their close association and have always advocated the routine removal of the appendix when operating for duodenal ulcer. I have also seen all sorts of stomach symptoms clear up after an exploratory laparotomy when the stomach was found normal and the appendix

removed. I have also seen several cases of pylephlebitis and abscess of the liver after appendicitis and recall one case of pyemia following an appendicitis. I have had no experience with the Smithies-Percy treatment of pernicious anemia.

In conclusion, I may add that it is difficult to get at the truth about focal infections of the gall-bladder and appendix because the enthusiast attributes all improvement to this source while the many failures never find their way into print; one thing, however, seems certain—the possible absorption of poison from chronically diseased gall-bladders and appendices is still another reason for early surgical intervention.

626-632 Metropolitan Building.

FOCAL INFECTIONS OF THE GENITO-URINARY ORGANS*

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Each contributor to this symposium will claim his locality the most prolific source of focal infections, but undoubtedly the Genito-Urinary tract must be counted among the foremost. This is not overestimated when we consider the frequency of gonorrhoeal infections with accompanying disturbances in the male internal genitalia, the close proximity of the prostate and seminal vesicles to the constantly infected rectum and lower bowel, and the physiologic excretory functions of these organs. The commonly accepted idea of infections of the male internal genitalia being invariably postgonorrhoeal is very fallacious, for many such cases are due to bacterial infection which comes down through the urinary tract having been eliminated through the kidneys during acute infections elsewhere in the body, for example during an attack of typhoid, tonsillitis, grippe, etc. Infections also reach the prostate and vesicles from the rectum by way of the lymphatics as a result of proctitis, rectal ulcer, and hemorrhoids. More common still are those arising in the genital organs themselves as a result of long continued masturbation or repeated ungratified erections which produce very chronic processes associated with remote symptoms of a severe character. The excretory function of the organs in health and disease elsewhere in the body lays them particularly liable to injury and infection in the performance of their duty. Almost every indiscretion of the individual has its corresponding deleterious effect. The kidneys are called on continually to excrete waste products and bacteria, and this they generally do without the slightest

* Read in a symposium at the meeting of the St. Louis Medical Society, Feb. 23, 1918.

aftermath, but unfortunately this is not always the case. It may be stated that the genito-urinary tract gives rise to as many of the acute septic conditions as any other group of organs in the human body. We are coming to realize more and more each day the importance of urological infections as etiologic factors in such diseases as uremia, sepsis, septicemia, pyemia, osteo-arthritis, arthritis deformans, lumbago, sciatica, neuritis and perineuritis. Their remote influence may be felt in gastrointestinal and cardiac disturbances and in general toxemias.

A moment's reflection will call to every one's mind many sufferers who have been labeled every disease from malaria to neurasthenia sexualis and who have received all kinds of treatment without relief, while a simple urinalysis would have yielded the solution of their perplexing affliction. Many diseases of the genito-urinary organs, which give no symptoms referable to the tract, namely, silent infections, are due to bacterial infections or repeated engorgements lowering resistance, followed by bacterial invasion, and manifested by disorders of internal secretion. Common illustrations of these conditions are the patients who are generally run down and toxic, feeling languid and lazy with no special pain or symptom of urinary distress with prostate and vesicles distended and infected, abscesses or caseous areas in the kidney, or sex glands which are not functioning normally in furnishing internal secretions containing necessary hormones.

In a study of a very large number of tabetics, patients with prostatic hypertrophy and stricture cases, we have observed that patients do not die of their syphilis, adenoma or scar tissue, but of uremia due to mechanical obstruction with resultant back pressure on the kidneys, gradual dilatation, infection and destruction of these organs. On innumerable occasions we have seen gouty and rheumatic conditions, also glycosuria, disappear after removal of a hypertrophied prostate.

Many renal stones, especially the large coral ones completely filling the renal pelvis and calyces, causing infection and destruction of the kidneys, are silent as far as the urinary tract is concerned. These patients often complain of gastrointestinal disorders, especially epigastric pain or distress. Again, the patient may complain of nausea and vomiting, while bowel disturbances are common. Often the only complaints are of chills and fever with general malaise, and these cases easily pass for malaria, grippe, anemia, and what not.

A frequent observation in infections of the prostate and seminal vesicles is a general run down feeling, not an especial complaint, but noticed by improvement under routine prostatic treatment. Many a case of chronic costiveness is completely relieved during a

course of prostatic massage. Through the untiring endeavors of Belfield, Fuller, Squier, and Billings, the profession is at last beginning to realize the relationship existing between many joint conditions and urinary infections. Gonorrheal arthritis itself presents no difficulties but the nonarticular osteoarthritis, presenting chronicity, pain, stiffness and often ending in organic structural change, formerly racked the brain of the practitioner in locating the causative lesion. It is often found in the prostate or seminal vesicles. Beside the joint lesions, time honored sciatica and lumbago find their origin in affections of the genito-urinary organs.

From the foregoing we should not be dubious concerning the astonishing results obtained by the operations of irrigation and drainage of the seminal vesicles, viz.: vasopuncture and seminal vesiculotomy, in some of these joint cases. Cardiac lesions frequently originate in focal infections of the male genitalia. We are all too familiar with the so-called sexual neurasthenic, the man whose sexual symptoms become his paramount thoughts and very often lead him to distraction and self-destruction. Kenefick thinks these phenomena are either mechanical, from vesicular irritation, or toxic, due to elaboration of products secreted into the blood causing a perverted function of the cortex of the brain.

Physicians are often confronted with the report of the finding of a few leucocytes in the urine; this is synonymous with pus, but nevertheless many patients are allowed to go on with their affliction and their few leucocytes when a very careful urinalysis, cystoscopic examination, etc., would disclose the existence of a marked active suppurative focus. Urological diagnosis records about 100 per cent. correct diagnoses if thorough investigation is made, for all parts of the tract can be either inspected, palpated, percussed, or otherwise tested. The statistics of a large number of renal conditions at Barnes Hospital and Washington University Dispensary give an index to the gross injustice done to many patients when at least a careful urinalysis is left undone. In the series were 62 cases of pyelitis, 9 per cent. diagnosed correctly before admission to the clinic or hospital; 43 cases of pyelonephritis, 7 per cent. correct; 34 cases calculus with 26 per cent. correct previous diagnoses.

In any condition where there is doubt as to the causative lesion or where the source of infection seems mysteriously hidden, we should always be mindful of the presence of the genito-urinary organs and the possibility of their harboring focal infections and very frequently our search will be justly rewarded with positive and unmistakable findings, and best of all our patients will find relief.

Humboldt Building.

FOCAL INFECTIONS OF THE FEMALE GENITALIA *

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No search for the primary site of a focal infection in women should omit a thorough examination of the entire genital tract. While there is no contention that the obscure chronic form of focal infection is in many instances due to an inflammatory process in the pelvis, we are at times astonished how in the absence of any pronounced symptoms we may come across the responsible agent for infection in this region.

Our consideration of the subject may properly be divided into two groups:

1. The cases in which the primary focus is elsewhere and the genital organs are secondarily involved.

2. The cases in which the primary focus lies in the genital tract.

In the first group the offending micro-organism may be the streptococcus, the colon bacillus or the typhoid bacillus. The organ infected is usually the tube or ovary, especially ovarian retention cysts. I have recently had occasion to observe such a case in a woman 45 years of age who ran a steadily remittent fever up to 102°-103° for several weeks without apparent etiology and without relation to the ordinary course of pelvic infection. There was considerable mental hebetude and slight delirium, and while a mass the size of a fist was to be felt in the pelvis, the slow pulse rate and absence of peritoneal irritation did not suggest an ordinary septic infection. The patient had not had typhoid fever. It was finally decided to do a Widal test, which Dr. Ives found on two occasions to be strongly positive. The adnexal masses were removed by laparotomy March 1, 1918, and the patient made a satisfactory recovery. From the right tubo-ovarian sac a bacillus was obtained in pure culture which has not yet been positively identified, but apparently belongs either to the typhoid or colon group. Such secondary metastatic infections with the typhoid bacillus have been reported by a number of writers. As to the alleged etiological relation of chronic streptococcus infection to cystic degeneration of the ovary I agree with Billings that this needs confirmatory bacteriologic research.

2. The group in which the primary focus lies in the genital tract is more numerous and may be subdivided into (a) the acute infections; (b) the chronic infections.

Under the head of acute infections we should properly include the septicemias associated with the pregnant state. Here there are usually very

definite local symptoms and a clear clinical history of instrumentation or faulty asepsis in the management of the abortion or the labor. Pelveoperitonitis and a purulent endometritis is the rule. Yet we should be on our guard against overlooking those cases in which no such symptoms develop, but in which there forms a small thrombophlebitic area in the uterine or iliac veins which scatters infectious agents by way of the blood-stream into all parts of the body. Such a focus may give rise to no pelvic distress. Arthritis, endocarditis, pulmonary embolism, etc., are common sequellæ. While such infections are relatively acute in their course and often fatal, we not infrequently find the development of a chronic stage in which the pelvic organs have become entirely normal and a secondarily infected organ has assumed the rôle of the primary focus.

The instances of gonorrheal arthritis, endocarditis or in other words of gonococcus septicemia are relatively few. Gonorrhea as such is a disease of the mucosal epithelium without appreciable involvement of connective tissue or lymphatics. It is usually self limited. Abscesses in the tubes will become sterile in a comparatively short time without systemic symptoms. In a large proportion of those cases in which an arthritis follows gonorrhea, there is a history of instrumentation in the active or subacute stage of the disease. Apparently it is the penetration of the submucous tissues by the instrument that pushes the gonococci into the lymph or blood-stream. The abandonment of routine intrauterine applications in gonorrhea has decreased considerably the frequency of gonorrheal rheumatism in women.

We now come to that phase of our subject which is of greatest significance in the present symposium—the cases where an infection of the genital tract leads to the typical symptoms of focal infections with temperature elevations, high blood pressure, arthritic pain and swelling, etc. When we consider the frequency of chronic pus collections in the tubes, the relative infrequency of chronic joint infections in these women is rather striking. Most of these infections are due to gonococci, and my personal impression is that the undisturbed gonorrheal infection rapidly becomes encapsulated and the infecting organism destroyed. Only secondary infection of such sacs with septic organisms or colon bacillus gives rise to more general systemic disturbance. The size of the pus-sac has usually no relationship to the amount of systemic infection.

The uterus is rarely the focus of a pus infection, since its walls are rigid and drainage of any discharge is unobstructed. Where, however, as in women beyond the menopause there is an almost complete obliteration of the cervical

* Read in Symposium, St. Louis Medical Society, March 30, 1918.

canal, we occasionally find a definite infection of the uterine cavity with the formation of a pyometra of considerable size. In some of these women the pelvic distress is slight and the discharge moderate except for an occasional gush of purulent material. Where joint symptoms develop in older women and there is a history of intermittent vaginal discharge, a careful bimanual and specular examination should be made. A senile atrophic vaginitis is usually associated with such a condition of pyometra.

The frequent infections of the cervix with small retention cysts or ovula Nabothi, I do not believe to be often responsible for systemic symptoms. Such cysts are small and have a thick fibrous capsule. Local treatment or cervix amputation has not, in my experience given these women much relief from their systemic symptoms.

The vagina is also not an organ from which much absorption can be expected, and I have not found it to be the seat of a focal infection. An exception to this rule applies to the vaginitis gonorrhoeica of little girls in whom we occasionally find systemic infectious arthritis, endocarditis, etc. The same applies to the vulva, with the exception of an occasional furunculosis and infection of Bartholin's gland. We have in Bartholin's gland a structure which is originally infected by the gonococcus as a rule. Once, however, the latter caused a dilatation of the gland and its ramifications with mucous—ideal conditions for a secondary infection with pus organisms present, and from such a secondary infection we may get systemic disturbances. A striking illustration of this sort came under my observation last year.

Mrs. K., aged 46, had had one child 12 years previously, followed by several mild attacks of ovarian pain and an infection in the left labium which was lanced ten years ago but which had not caused any distress since. For the last two to three years she had been having rheumatic pains. In February, 1916, she developed rheumatic swellings affecting many joints (hands, feet, knees, elbows, rigid neck). After various forms of medication without relief, she went to Hot Springs, Ark., for six weeks of hot baths. Finally in December of the same year she consulted Drs. Soper and Mills who suspected a focal infection and began a systematic search for the primary cause. Nothing was found in the mouth or digestive tract. A sigmoidoscopy was negative but gave rise to considerable pain to the left of the anal ring. Only on that occasion did she mention the fact that she had had soreness in those parts for the previous weeks. At the time of this examination every movement of the joints caused excruciating pain, her blood pressure was 216 systolic and 110 diastolic, the temperature was 101.5 F., and the urine showed a trace of albumin. I was called in consultation the next day and found her in bed complaining of increasing soreness in the vulvar region. Examination showed a somewhat deeply situated left-sided vulvovaginal abscess. After two days of poulticing, the abscess softened and was incised. About a tablespoonful of foul smelling pus escaped. Stained smears

from the pus showed a bacillus resembling the colon. With the incision the temperature dropped to 99 F., the blood pressure to 140 systolic, and the joint pains became 50 per cent. lessened. Continued slight purulent discharge from the old sinus and continued joint symptoms indicated the necessity of complete excision of the gland, which was done Jan. 11, 1917. The improvement in the joints continued, and six months after the operation they were completely cured. The patient reported to me last week and I found the local condition healed and no trace of her joint infections. ¶

The treatment of focal infections in the female genitalia will usually consist of the removal of the offending organ. I would, however, caution against any routine removal of pus-tubes in these women until other more accessible parts of the body had been corrected without relief of systemic disturbances. The determination of the primary focus of infection is always somewhat of a gamble. I hesitate, therefore, in recommending a laparotomy upon women with symptoms of focal infection unless the pelvic condition causes very definite symptoms in itself or until other possible sources of infection are carefully excluded.

A pyometra can usually be corrected by thorough dilatation and drainage of the uterine cavity without removal of the organ itself. Occasionally, however, hysterectomy will prove necessary. Infections of Bartholin's gland are best treated by removal of that structure. As to the use of bacterial antigens as vaccines, many have claimed brilliant results in building up the natural defenses of the body to infection. My personal experience has been disappointing, both in the stock and autogenous vaccines and both in the acute and chronic pelvic infections. This applies particularly to the gonococcus vaccines by the use of which I do not recall a single improvement in local conditions.

In conclusion I should like to suggest that more attention be paid to the after-treatment of these cases. We are too apt to be content with the removal of what we believe to be the primary focus. Patients should be made to realize that only in a few instances will this alone give prompt results. It usually requires a long period of time before the patient is able to throw off completely the secondary infections present in the body. To accomplish this more readily we must build up the patient's personal resistance by a prolonged period of rest, fresh air and good food. These principles of therapy that are so important in the cure of the acute septicemias apply equally to the chronic focal infections. Let us see to it that our patients get all the sunshine, oxygen and nourishment that they can possibly absorb. Only by so doing can we bring to a successful issue the favorable conditions produced by the removal of the primary focus.

Wall Building.

THE POISON OF EVOLUTION

G. FREDERICK WRIGHT, LL.D.

Editor Bibliotheca Sacra

OBERLIN, OHIO

AN INTRODUCTION TO PSEUDONYMOUS SCIENCE
AND PHILOSOPHY OF DECEIT, BY

E. W. SAUNDERS, M.D.

The word evolution is in itself innocent enough and has a large range of legitimate use. The Bible, indeed, teaches a system of evolution. The world was not made in an instant, or even in one day (whatever period day may signify) but in six days. Throughout the whole process there was an orderly progress from lower to higher forms of life. In short there is an established *order* in all the Creator's work. Even the Kingdom of Heaven is like a grain of mustard seed which, being planted, grew from the smallest beginnings to be a tree in which the fowls of heaven could take refuge. But recently the world has come into much deserved disrepute by the injection into it of erroneous and harmful theological and philosophical implications. The widely current doctrine of evolution which we are now compelled to combat is one which practically eliminates God from the whole creative process, and relegates mankind to the tender mercies of a mechanical universe the wheels of whose machinery were set in motion by chance and left to move on without any immediate divine direction. As many scientific men now use the word, evolution is a process with neither beginning nor end. It is an endless chain hitched to nothing and leading nowhere.

According to Huxley,¹ "The hypothesis of evolution supposes that in all this vast progression there will be no breach of continuity . . . but that the whole might be compared to that wonderful process of development which may be seen going on every day under our eyes, in virtue of which there arises, out of the semi-fluid, comparatively homogeneous substance which we call an egg, the complicated higher organization of one of the higher animals."

But all this is a theory, or hypothesis, whose proof depends on deduction rather than induction. Its web is like that of the spider, which he spins wholly from his own bowels. One of the best illustrations of the process was that of Tyndall, when, in his Belfast address, beginning to look with his "mind's eye" into the abysmal recesses of the infinite past, he thought he saw Abraham, and Moses, and Homer, and Alexander, and Caesar, and Jesus Christ, and the long row of saints and martyrs; and the mariner's compass, and the theory of gravita-

tion, and the science of geology, and the steam engine, and the telegraph, and the telephone, and the whole social and political conditions at the beginning of the twentieth century, emerging by natural processes out of Huxley's "*comparatively* homogeneous substance which we call" not an egg, but the original whirling, fiery, star-dust. But why was the word *comparatively* prefixed to homogeneous. If a substance is only *comparatively* homogeneous it is not homogeneous at all.

Thus all these thorough-going evolutionists, and their number is legion, deceive themselves and the public by failing to think their theories through and by introducing modifying clauses which contradict their theory. How far the theory of evolution is from being established on a scientific basis is illustrated by Huxley's pronouncement on the subject in his article on biology in the Encyclopaedia Britannica, where he says, "The fact is that at the present moment there is not a shadow of trustworthy direct evidence that abiogenesis does take place, or has taken place, within the period during which the existence of life on the globe is recorded. But it need hardly be pointed out, that the fact does not in the slightest degree interfere with any conclusion that may be arrived at deductively from other considerations that, at some time or other, abiogenesis must have taken place. If the hypothesis of evolution is true, living matter must have arisen from not-living matter; for by the hypothesis, the condition of the globe was at one time such that living matter could not have existed in it, life being entirely incompatible with the gaseous state." Thus does science resolve itself into a robust faith which is not fazed by any amount of incredible assumption. It is refreshing to the theological mind to have an eminent authority in everything pertaining to the physiology of living beings publish an article which gives no uncertain sound respecting the fallacies of the current evolutionary hypothesis.

PSEUDONYMOUS SCIENCE AND PHILOSOPHY OF DECEIT*

E. W. SAUNDERS, M.D.

ST. LOUIS

A PROTEST AGAINST THE ATTEMPTED ENSLAVEMENT OF CHRISTIAN THOUGHT TO
HEATHENISM

This paper is not concerned with self-styled Christian Science, as from its title some might suppose. The senseless ungrammatical jumble of words contained in "Science and Health"

1. Huxley: American Addresses, p. 10.

* Read at the meeting of the Men's Club, Washington and Compton Avenue Church, February, 1918.

(first edition) defy analysis. The polyandric saint, the illiterate sage, who for so many years dispensed negative salvation from the Hub of the Universe at six hundred dollars per, has gone to her own place, and her thrifty followers with their pitiable dupes cannot be reached because they have no inch of ground in common with the possessors of normal mentality. No matter, no force, no personality, no responsibility, no law, no effects of law, no sensation, special or common, no logic, no meaning to words (except as given in the peculiar lexicon of the Saint of many aliases), all one vast negation, which might be termed Pantheism.

The terms in the title are taken from St. Paul's writings, applicable in his day and no less so now. What is science: Simply knowledge in its root meaning. Spelled with a large S it is defined by Sir William Hamilton as "The knowledge of the few, orderly and methodically arranged, so as to be attainable by the many." In its common acceptation today, those who are engaged in the pursuit of knowledge are by courtesy called scientists, even though they fail during a life time of earnest effort to attain the desired goal. But what of those who earn the unenviable title of "scientists falsely so called"? (Pseudonymous in the original Greek.) What is their characteristic? It is this: That they are incapable by constitution or by habit of distinguishing truth from error, fact from fancy. In scientific investigation it is necessary to formulate a theory before setting out to prove the meaning of the facts. The true scientist will never confuse his theory and his facts. The pseudonymous scientist continually does so.

In November, 1874, every university in the world was startled by the announcement from the platform of the British Association by the president, Prof. Tyndall, that generation *de novo* was at last an unquestionable truth of science. Many who condemned the prematurity of his statement confessed that they believed it to be true. The Christian thinking world was of course shocked as it never had been by any scientific utterance. Four years later, lecturing in a hall in London, Tyndall recanted, and forty-four years of scientific experiment and observation have confirmed the truth of the statement that the gulf between the living and the non-living is impassable. In 1914, speaking from the same platform in Melbourne, Sir Wm. Bates not only reaffirmed this truth, but stated that evolution from the simple to the complex was a delusion which he had only recently abandoned for the irrefutable statement that all that science knew of evolution was that "from the complex to the simple." This accords with the contention of the evolutionists concerning the fabled hippocampus, "which once had toes and then lost them."

With generation *de novo* disproved, it should

have been apparent to all honest truth seekers that the Darwinian theory of evolution had lost all interest.

At this point it is proper to state that by the Darwinian theory I mean what is popularly understood by that name. But it should be said that Darwin's followers outdid their great master and added to his theories an atheistic element which Darwin himself did not approve. At the close of his "Origin of Species" Darwin asserts that "secondary causes like those determining the birth and death of individual" had their laws "impressed on them by the Creator;" and he adds that "there is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one." Thus in Darwin's opinion nothing was "evolved" from secondary causes which had not been first "involved" by the Creator. He rarely used the word evolution and looked with great contempt upon Herbert Spencer's *a priori* efforts to compress the whole course of the universe into that word and claim it as an explanation. At the close of this life he repeatedly protested that he was in no respect an authority on religious subjects, and regretted that his devotion to a single line of study had unfitted him for expressing an opinion respecting them. The theory started out with the sententious statement that "In the beginning Fortuity brought together atoms, and thus life originated." Over against this place the majestic statement of Genesis "In the beginning God created." And what did this supreme deity Fortuity do? He begat a progeny of "Laws"! The law of "natural selection" first of all. What a conception: Fortuity begetting laws! *Mirabile dictu!* To my simple mind it is an absolutely impossible concept, but the whole grotesque thing should be now in the limbo of forgetfulness. Even the atoms of that day in science have been subdivided into as many as 1760 units; and what does the formula, "in the beginning Fortuitous atoms," look like now to the scientific mind? But what are the laws which the great god Fortuity was supposed to beget? But even the law of "Natural selection" to the study of which Darwin gave his life is now largely disproved and abandoned. Had he but taken the trouble to study after the monk Mendel, who published his wonderful observations in biology in 1865, he would have saved himself the remorse of a misspent life. Mendel's laws are laws indeed, enacted by the creator of all living things, and they put to shame the lawlessness of pseudo-scientific men.

But has evolution been at all humiliated by the disproof of the two theories upon which it built its colossal claims, "generation *de novo*," and "transmutation of species"? Not at all. It is in America at least more arrogant in its

claims than ever before. It still vociferates that man is descended from the monkey, and whosoever does not admit this is no scientist, while we biblical scientists no less confidently affirm, as did Agassiz over forty years ago, that there are no evolutionary scientists because "the man who now becomes an evolutionist thereby ceases to be a scientist." But waiving for the moment the necessary first two postulates of the whole mythical system, geology has refused to allow more than a few thousand years for the wonderful evolution of man from the ape. Professor Wright and a number of others unite in declaring that not anything like twenty thousand years of geologic time can be allowed to the ape men. The oldest human skulls yet discovered have a cranial capacity equal to that of the average European of today. Comparative anatomists of the very first rank have long ago given it as their ultimatum that the gap between the highest ape and the lowest man is immeasurably greater than that between the lowest and the highest man. Many claims have been made along this line, and discoveries of something like the missing links have been heralded, but in the end they have all reflected discredit upon those who brought them forward. In view of such facts, for any one who hopes to win the title of scientist to claim that embryology furnishes the proof necessary to establish their claims by *analogy only*, is simply astounding. Had the claims in the other positive fields been substantiated embryology might have furnished a number of interesting analogies; but to claim that analogy can absolutely prove anything, is something new in the scientific world. In the last few years physics has proved irrefutably that matter is not eternal, and therefore the claim that matter was antecedent to all force, whether personal or impersonal, falls to the ground.

For a half a century and more Darwinism in some form or some modification of terms dominated the self-styled scientific and philosophic world, and still does so in our own beloved country which slavishly appropriated it from the Christ-hating misanthropic land of Germany, where it was accepted and utilized for a short time only, because the self-styled "supermen" were determined to produce a superior breed of gorillas who or rather which should dominate the world. Having succeeded in dehumanizing themselves thoroughly they cast aside Darwinism, calling it a "disgrace to German philosophy," thus leaving their poor transatlantic dupes in a pitiable plight. Nothing more humiliating to our national pride has ever occurred than the behavior of our pseudo-scientific men in slavishly adopting evolution from Germany rather than from England, its true source, and in the way in which they still hold to it long after it has been disproved. As Philip Mauro truly says, it is not a science at

all but an Aristotelian philosophy, false in every premise and conclusion; and this in the year of our Lord, 1918, three hundred years after Lord Bacon taught men how to reason truly.

This language seems harsh, but it is no harsher than our Lord himself used toward the false teachers of His day. A true scientist will not maintain a cause, no matter how dear to his heart and necessary to his reputation, one moment longer than he thinks it to be true. Not so the evolutionist. Not only does he unblushingly maintain the claims originally put forth, in a more or less modified form, but he continually and vociferously affirms that "all scientists are evolutionists, and all scholars and all philosophers." Many who repeat these lies are deceived, many more know them to be false. It is inconceivable to the honest scientist that they should maintain them at all, but to boldly proclaim that they are absolutely proven and exclusively true condemns them as charlatans of the worst kind.

It was unfortunately true that for some years the monkey-men seemed to have everything their own way, after Agassiz's death, until a host of protagonists for true science and for the Bible arose. It is certainly discreditable to the whole scientific world that Mendel's marvelous discoveries were unnoticed from 1865 to 1900. Not that there were wanting at all times men in the foremost rank of all branches of human knowledge who held firmly to "the faith once for all delivered to the saints" in the infallible word of God. Our Lord, the head of all science as well as of all religion, declared, "By their fruits ye shall know them." What has been the fruit of Darwinism as seen in the last two generations? A declension from the faith such as has never been witnessed before in the history of Christianity; and as a direct result the supermen, the gorillas of Prussia, have been let loose to punish the whole world for its impiety. It would seem that to any honest mind a perusal of the history of the men who originated this accursed system, and those who were most influential in propagating it, would deter from having anything to do with it.

Darwin himself wrote at one time that his mind had become so atrophied and his whole nature impoverished in every direction but the one, his chosen field of investigation, that music was a hideous noise, poetry made him sick at the stomach, and as for the knowledge of God, the further he went the more completely he had lost all sense of God in the universe. To the glory of our Great Redeemer be it here recorded that this colossal sinner returned in his old age to the Savior against whom he had so sinned. Here are his last recorded utterances to the curate who had come to speak in the chapel to his retainers: "An expression of agony was upon his face as he replied, 'I was a young man with unformed ideas. I threw out

queries, suggestions, wondering all the time over everything, and to my astonishment the ideas took like wildfire; people made a religion of them.' "And what," said the curate, "shall I speak about to the people? 'Christ Jesus and his salvation. Is not that the best theme?'" Alas, with Wallace, Darwin's coadjutor and companion in the greatest crime of the ages, it fared not so well. When the desolation and the dreariness of a soulless, Godless materialism became unbearable, he sought solace in demonism.

And what of Haeckel, the acknowledged leader and exponent of Darwinism in Germany? His disgrace and fall are too recent to need comment. When overtaken in his colossal system of fraud, adding to or subtracting from the number of vertebrae in fossils to suit his malevolent purpose, and confronted with the evidence of his guilt, he whined: "I would be covered with shame were it not for the fact that everybody does the same thing." And this was the man who was at one time the idol of the German intellectuals and who almost achieved his object of having his "Riddle of the Universe" substituted for the Bible in the teaching of the German schools. A couple of the English critics who applied the principles of Darwinism to the interpretation of the Pentateuch, who in their day stood at the head of the system, were equally exposed and disgraced by Harold Wiener, the noted barrister of London, who publicly accused them of disgraceful conduct, "which would have secured their expulsion from any service club in the United Kingdom." He hounded them in the hope of inducing them to sue him for slander so that he might expose them, but they discreetly kept silence.

Turning from these examples to some that are brighter, we mention first of all Virchow, the foremost German scientist of the close of the last century, who for a short while in the beginning of Darwinism, gave a cautious, provisional assent, but who soon turned against its supporters and lashed them unmercifully to the day of his death with his keen satires. Dr. James H. Brookes told me that on his last visit to Europe he said to Virchow: "Herr Hoffrath, is there anything, in the way of facts I mean, in all the realms of science to forbid my belief in this book which I hold in my hand," taking from his breast pocket the Bible which he always carried there. "Not one thing, Dr. Brookes," was the solemn reply.

George J. Romanes of Oxford was one of Darwin's most enthusiastic and able supporters for many years, but eventually he became heart sick, dissatisfied, and becoming acquainted with the missionary Gulick, a most interesting and pathetic correspondence ensued, ending in Romanes' conversion to the faith of Christ, and total renunciation of Darwinism. Gulick was born in one of the Pacific Islands where his

father was a missionary and from boyhood studied the crustaceans found in the creeks and bays of the island, and thereby accumulated evidence which disproved Darwin's theories, not only in his own estimation but in that of his friend Romanes. One of the most pathetic letters on record is that of Romanes to his friend telling him that he had lost God and wanted to find him again; that he recognized in Gulick's a mind far superior to his own, and he called upon him for help. For the rest of his life Romanes faithfully served the Savior, whose very existence he had so long labored to disprove.

In my own experience I had a friend whose mind excelled in scope that of any man whom I have ever known, an acknowledged leader at the bar throughout a large section of the country, who for forty years tried to bring his mind into subjection to evolution and to a settled disbelief of the Bible. Our correspondence would have made a book, as well as our conferences which would last for days at a time. At last I said to him one day, "How is it possible that your mind, so trained and steeped in jural science can be persuaded that Darwinism is proved." He replied vehemently, "I never said it was proved, but I do maintain that it offers the most probable explanation of the universe." Several years elapsed, during which I sent him book after book, until finally Urquhart's "Inspiration and Accuracy of the Holy Scriptures" reached him. He was convinced, and after returning the book asked me to lend it to him again. At our last conference he said, "Why do you still maintain the defensive?" You orthodox men have it now all your own way, and why not assume the offensive?" The last day of his life on earth he kept his finger pointed to Heaven, perfectly clear in mind but unable to speak.

Another friend of great learning and possessed of a most philosophic mind was awaiting an operation which proved fatal. I begged him to read Townsend's "Collapse of Evolution." On entering his room the next day, he sprang up from his seat and paced the room, the tears streaming down his cheeks, and exclaimed, "Oh, doctor, I thought it was all settled long ago and I find nothing is settled, nothing." "But," I said, "When you read Haeckel's 'Riddle of the Universe,' were you satisfied to the uttermost in your own mind?" "No, I was not, but I said to myself, what I cannot explain, these great minds can." "But, if you were going to surrender your mind to anyone else's, why not to Jesus Christ's." "Oh," he cried in agony, "I see it now, but it is too late, too late." We who know the gentle Savior who restored Peter, know too well that this belated repentance would not despised by the Savior of men.

And now as to the insufferable statement that all scintists are evolutionists, that no great

men of science could be humble believers in Christ, and in "the record which God has given of his Son" in the Bible, take the first in history, King Solomon, the peerless jurist, the greatest extant writer on moral philosophy, the father of the natural sciences—he was a Creationist and a believer in the second person of the Trinity, and so was his co-writer, Agur. Sir Isaac Newton has been placed by scientists in a class all by himself, a pathfinder, "a man whose guesses were worth more than the certainties of other men," and Newton was a devout believer in and a constant student of the Word of God. In his writings we have the statement that in order to the fulfillment of some of the prophecies, "a mode of travel would have to be invented which would convey men over the surface of the earth at the rate of forty miles an hour." To this Voltaire answered, "The old dotard, he was a wise man once, but the study of that foolish book, the bible, has taken away all the intellect he ever had." And what of Kepler, and of Herschel, and of Locke, the keenest intellect that Scotland ever produced, and of Faraday, and of Greenleaf, and of Marshall, and of Morse, and of a host of others, and of Wright, one of the most versatile scientists that we have—time would fail us to mention them all—who were believers in divine revelation and leaders in every branch of human knowledge? The fact is, an examination of the records would show that the greatest and the most beneficent intellects have been subject to the word of God. No more brazen lie was ever shouted from the pit than this one that we hear every day reiterated, "All men of science, all scholars, are evolutionists."

And what as to the possibility of harmonizing evolution and the Bible? Happily many minds can. My mind never could, and I am afraid that the majority of men find themselves so situated in their mental make-up. And what is evolution but the last final attempt of man to reduce himself to the level of the brute or below it! The present day men of science scorn the Egyptians who worshipped even cow-dung, whose empire fell before the Assyrian invasion because they would not harm the screen of brutes which the invaders placed before them in attacking the principal city; and they pity the Indian transmigrators who sacrifice every year hundreds of thousands of human beings to the worshipful cobra, but none the less they seek to degrade their Divine ancestry and to flee from the presence of God to their imaginary paternal brute home. Anything to get away from the unbearable presence and the condemning Word of God. Oh, monkey man, as a deceiver and emissary of the pit, you bring, whether you know it or not, innumerable souls to that dread abode!

SOME NOTES ON THE PHYSIOLOGY AND PATHOLOGY OF THE MEDIASTINUM*

GEORGE RICHTER, M.D.
ST. LOUIS

The mediastinum is understood to be that part of the thoracic cavity which is found between the vertebral column posteriorly and the sternum and part of the cartilages of the ribs anteriorly, bordered by the pleurae to the right and left. The upper aspect is defined by the thoracic aperture about the episternal notch, and below by the diaphragm.

The contents of this space is a mass of connective tissue intermingled with numerous elastic fibers, and between its meshes are found the heart, the thymus gland and a great many lymphatics. It surrounds and evidently supports these organs, and also a large part of the trachea and large bronchi, the esophagus, the large blood vessels, the trunks of the vagus, the sympathetic, phrenic and other nerves.

It is not easy to form a good idea as to its shape and condition. Very few who have not made it a special study have a concise idea as to its character, except perhaps those surgeons who have had occasion to operate within its dangerous territory. Ordinarily, in autopsies we do not observe it very closely. After the sternum has been removed in the routine way, the pathologist cuts through it to examine the heart and aorta, rarely looking for its other contents. Much of what is known we owe to roentgenography, but for instance in tumors, it is difficult to differentiate between mediastinal and lung tumors at the hilus. And yet the mediastinum, thanks to its most important contents, ought to be of special interest. We might expect that this tissue with its elaborate lymphatic system, aside from hilus glands and the thoracic duct, would be the seat of disturbances other than gross tumors, and give rise to clinical symptoms. Its seclusion, however, between other organs and behind many bony structures makes it inaccessible for our ordinary methods of examination and we can only suspect the trouble by circumstantial evidence.

The support of its contents and the lymphatic character are not the only essentials of this tissue. It serves also to protect either side of the thoracic cavity against disturbance of the other. It insures an equable circulation of the blood and guards vessels and nerves from injuries likely to arise by the rhythmic but unequal functions of respiration, deglutition and heart action. No rigid formation could answer such purposes, as the diameter of the thorax

changes continuously with the phases of respiration. The morphology of this structure is very complicated.

Following Bergmann's excellent discourse we may well speak of manifold functions of the mediastinum. The mediastinum, as a whole, forms a separating wall between the two lungs and maintains an independence of the one pleural cavity from the other. A change of pressure on one side will ordinarily not affect the other. Thus a pleural effusion on the right side will permit the left lung to exercise a compensating function. This is made possible by a marked distension of the healthy side—a measureable expansion—in which, however, also the affected side participates, with the result that the negative pressure (named after Donders) is maintained at least above the exudate, while within the lower latitudes, if I may use the expression, hydraulic pressure is apt to produce a positive pressure. As stated, such an independence of either side is possible only by the presence of a firm wall between the two.

Pathologic conditions of the mediastinum may disturb the independence. Excessively increased pressure on one side may cause the mediastinum to "give," which is possible only by a gradual loosening of its fibers. An analogy to this is found in the pericardium. A normal pericardium can hold only a small amount of fluid, and forcing much more into it would bring about its rupture. But when inflamed it is apt to hold an enormous quantity, because inflammatory processes have loosened its structure. The same may happen with the mediastinum. But this gives way usually only on its weak points, of which there are two, an upper, anterior, and a lower, posterior, as they have been studied and described by Nitsch. The upper weak spot is a mass of loose fibers and adipose tissue replacing an atrophied thymus gland. The mediastinum is about the shape of an hour-glass with its smallest part just above the heart, which forms the lower half of the hour-glass, while the upper and much smaller part of the figure is represented by the thymus or its remnants. We may also divide the mediastinum into an anterior and a posterior region. The latter contains esophagus, descending aorta, vena cava inferior, azygos and hemiazygos, vagus, sympathetic and thoracic duct. The anterior holds the heart, ascending aorta, the arch, pulmonary artery, cava superior, trachea, bronchi, phrenic nerve and thymus.

The two weak spots have been studied by Brauer. He describes as the lower weak spot the lower posterior part, where both pleuræ are separated only by the cava inferior, esophagus and aorta. In some cases the upper weak spot

is represented by a thin membrane formed by right and left pleura growing together. Strong pressure on one side will cause this membrane to bulge out into the other side, ballooning like an inflated rubber. Now, if at such a place there should form a cavity, breaking into the pleura, causing a pneumothorax, this may break through also into the other side with the result of sudden death, as in one of my cases. Not so very rare is a mediastinal emphysema from the same cause.

As to the lower, posterior weak spot it is to be remembered that aorta and esophagus run along the left side of the spine and the right pleura reaches the median line. A large exudate on the right side will therefore much more readily bulge towards the left, than a left exudate to the right side, from which its border is more distant. An expression of this is found in the Grocco sign, a triangular dulness along the lower dorsal spine on the healthy side in pleuritic effusion. It is found far more frequently in pleurisy of the right side. The lower weak spot finds little protection in aorta and esophagus. The upper weak spot is more rarely endangered. The compressed lung in larger exudates acts here as a cushion. But it must not be supposed that such bulging is simply due to rule, even in very large exudates the pressure, a pressure from an overfilled cavity. For, as at least above the fluid remains negative, due to a compensating inspiratory expansion of the whole thorax. The difference in pressure in such cases between the two sides is on the negative side; and where it is lowest, on the healthy side, aspiration takes place, suction causing the bulging. It disappears in an open pneumothorax, just as the curved line of dulness from the exudate changes into a horizontal line.

Such suction may lead to what has been called a mediastinal hernia and is demonstrated by percussion and by the roentgen ray.

It has been pointed out before how the mediastinum protects the organs which it supports, the vital importance of which should be quite evident without going into detail. If pressure from either side was not prevented, compression of the bronchi, trachea, esophagus, heart, blood vessels and nerves would result in the gravest disturbances, which really does occur whenever this protective function is lost.

The third important function of the mediastinum is found in the fact that it consists practically of lymphatics which, through the diaphragm, connect with the peritoneum and through the upper aperture with those of the cervical region. It is an extensive system of lymph-spaces. Inflammatory processes, acute or chronic, with serous or pus infiltration or

with proliferation of connective tissue, which is bound to contract in time, are observed. Such conditions are found in conjunction with plastic pleurisy, pericarditis — acute or chronic — with tubercular infiltration (not only of the hilus-glands), with abscesses descending from the throat, with septicemia, etc.

The adhesive mediastinopericarditis is well described in the textbooks. A paradox pulse, a slowing of the beat during inspiration, in distinction with the slowing during expiration in respiratory arrhythmia, due either to constricting bands about the aorta or an inspiratory pull of the vagus, is a frequent symptom. Adhesion of the pericardium to the thoracic wall is observed or diagnosed when the apex retracts during systole and is propelled during diastole. This is often wrongly interpreted when a systolic retraction shows over the area covering the right heart. Here a systolic retraction is normal.

Pus in the mediastinum may be diagnosed when an inflammatory edema appears over the sternum. Pains resemble those of an angina pectoris, except that in mediastinal conditions the pain becomes excruciating on pressure upon the sternum.

Chronic and subacute mediastinitis is perhaps much more frequent than recognized. Occasionally one encounters a case in which the patient complains of an oppression, a dull pain below the sternum. It is described similarly to a heartburn. There is also pain on deglutition, felt close to the cardia. Perhaps a hacking cough and a slight elevation of temperature, a soreness in the trachea exist. Careful examination of lungs, heart, stomach, etc., is negative. Similar pain is usually complained of in the back between the shoulder blades. The condition lasts for several weeks and does not respond to routine symptomatic treatment. I believe that the symptoms are due to a mild form of mediastinitis, particularly when some disturbances of the nerves traveling through this tissue occur, manifest by persistent hiccough, altered pulse rate and an unaccountable nausea. Irritation of the trunk of a nerve is felt as that of its peripheral endings. Probably you all have seen such cases that were really puzzling.

Compression symptoms of the mediastinum are quite characteristic and when not well developed are easily overlooked. They vary much according to the exact location of the causative factor. In tumors of the mediastinum — and these are the more frequently recognized causes of the symptoms — disturbances are generally more clearly defined.

Compression of the cava superior leads to the establishment of collaterals through the surface veins of the thorax and upper part of abdomen.

The jugulars usually participate and are greatly distended. A dense edema with cyanosis betrays the trouble. The current in the veins is reversed — on compression with the finger they swell up above, while below they collapse. The cyanotic edema of the neck is known as the collar of Stokes.

A girdle of smaller distended veins corresponds to the insertion of the diaphragm; it exaggerates the analogous condition discovered in emphysema of the lungs. In milder forms the veins become engorged only during coughing spells. A one-sided, unilateral appearance of such symptoms would indicate the compression of the corresponding innominate vein. It has been found in syphilitic obliteration of an innominate vein. Dieulafoix has published an excellent discourse analyzing the symptoms.

The vena azygos may suffice to establish a collateral circulation, and skin-collaterals will then not form.

A chylothorax may be caused by compression of the thoracic duct. Compression of the pulmonary veins results in a hydrothorax. Arteries are much more resistant to compression, though a stenosis of the aorta from outside pressure occurs.

Compression of the trachea leads to a dyspnea, which, when accompanied by a bronchitis may be misinterpreted. The compression of only one bronchus shuts off the air from a circumscribed area, ending in hepatization of that part, which may be mistaken for a tumor.

Compression of the esophagus is often one of the first complaints of the patient. The sound finds no stenosis, but the fluoroscope reveals the seat of the trouble when a thick bismuth paste is swallowed.

Compression of the nerves causes symptoms referred to their peripheral organs. Where no organic basis to disturbances of the vagus, the phrenic or the sympathetic are found, one should think of the possible irritation of a nerve trunk in the mediastinum. Hoarseness and brassy cough may arise from some other cause than an aneurysm; the fluoroscope may show a pulsating tumor which is not an aneurysm. A gumma is particularly apt to cause local symptoms of compression.

It will suffice to mention the various possibilities without going into detail. It is not my intention to go over the great variety of tumors discovered here. Our knowledge of them has been greatly advanced by roentgen-ray studies.

What I do desire to point out is the three principal functions of the mediastinum: protective, supporting and lymphatic; also the fact that cases of milder forms of mediastinitis occur which are quite difficult to recognize.

Metropolitan Building.



MILTON P. OVERHOLSER, M.D.
President Missouri State Medical Association, 1918-1919

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EDITORIALS

MILTON P. OVERHOLSER, M.D.

PRESIDENT, 1918-1919

The election of Dr. M. P. Overholser to the presidency of our Association is a recognition of his faithful and disinterested service in the organization and a tribute to his professional attainments. The choice will have the universal approval of the members of the Association. Under his guiding hand we may rest assured that the affairs of the organization will be administered with the wisdom born of a knowledge of the high purposes of the organization. He was one of the first councilors after the reorganization in 1903, his district comprising the counties of Jackson, Henry, Johnson, Cass, Bates, St. Clair and Dade. Dr. Overholser was born on a farm in Cook County, Illinois, 59 years ago but at an early age his parents returned to Pennsylvania, their native state, where he attended the grade schools. Later they moved to Kansas and it was while a resident of that state that Dr. Overholser began his medical studies which culminated in his graduation from the Kansas City Medical College in 1884. After practicing in Kansas for several years he moved to Harrisonville, Mo., in 1889, where he has lived continuously and enjoys the confidence and esteem of all who know him in Cass County and adjoining counties.

For some years he held the chair of Hematology in the University Medical College of Kansas City. In 1910 he was appointed by Gov. Hadley a member of the State Board of Health and filled that position creditably until 1912 when Gov. Hadley appointed him superintendent of the State Hospital at Nevada. After finishing his term at that institution he retired to private practice at his home.

ANSWERING THE CALL

The physicians of Missouri—and not only in Missouri but all over the country—are answering the call of the Surgeon-General of the Army and of the Navy for 6,000 physicians, 5,000 for the Army and 1,000 for the Navy, with gratifying promptness. While we have no official reports of the number who have applied for commissions we know from the many inquiries that have come to us and from other sources that the profession is not slacking. The call is imperative, the need is urgent.

While many physicians have hesitated to offer their services in the past there are now few who can resist the impulse to do their duty. Of course everyone wants the highest rank he can obtain when accepting a commission, but patriotism must be the moving spirit; all the rest will follow in due time. Those who accept commissions at this time whatever the rank given them have many advantages that did not accrue to those who entered the service some time ago. Says the *Journal of the American Medical Association* recently: "The physician who volunteers for the Medical Reserve Corps at this time does so under different circumstances than did the men who volunteered a year ago when our country entered the war. Constructive legislation in the intervening period has removed many of the difficulties which at that time confronted the physician who faced the question as whether or not he could volunteer for service. Congress has since provided for the care of dependants, for insurance and compensation, for increased pay on foreign service, for commutation of quarters, heat, and light, for a moratorium on debts and leases of officers in the service, and for reconstruction and reeducation of the disabled and injured. Army regulations now provide that officers may purchase equipment directly from the Quartermaster's Department. Physicians who entered the service over a year ago did so without the assurance that this new legislation conveys. They made greater sacrifices than are required now."

Every day brings its new urge for the young, robust, healthy physician with a loyal heart and a love of his country to give his services to the government in this hour of the nation's need. Having done this he can face the world now and hereafter with the proud consciousness that he has done his duty, than which there is no higher reward for a MAN.

THE SIXTY-FIRST ANNUAL SESSION

The annual meeting of the Association held at Jefferson City May 6-8 was in many respects one of the most enjoyable sessions that we have held in many years. The attendance, as was expected, did not reach the number that usually registers at the annual gathering but all the members and guests who were present seemed entirely satisfied with the work accomplished and enjoyed the hospitality of the local members.

It was something of an event to meet in the new capitol and initiate the chamber of the House of Representatives as a meeting hall. During the last session of the General Assembly this hall was occupied toward the close of the session by the Senate and House of Representatives and state officers to dedicate the room but it was then in a most incomplete condition. Our thanks are due to the Governor and all the members of the Commission for their untiring efforts in having the room ready for our meeting. The new carpets, the desks, the lighting system, were all installed for our benefit, a courtesy that was officially recognized by a formal vote of thanks.

The House of Delegates passed a resolution strongly urging County Medical Societies to maintain their members who have gone to the war in good standing in the societies and the State Association. Many of the societies have already taken this action and undoubtedly all of them will do so now. Different methods have been adopted to accomplish this end, some of the counties paying the state assessment from the society treasury, others levying an assessment or voluntary contribution to pay the state assessment only, and all requiring no payment of county dues.

In delivering his address of welcome Governor Gardner gave an inspiring speech on the war and the necessity for every man doing all in his power to aid his government and paid a tribute to the profession for its prompt response to the call for Army surgeons. General Harvey C. Clark, Adjutant-General of the state, delivered an intensely interesting address on the work of the Missouri military forces in which he paid a splendid tribute to one of our ex-presidents, Dr. J. D. Griffith of Kansas City, for his pioneer work in military hygiene. Major Franklin Martin, Chairman of the General

Medical Board of the Advisory Commission of the Council of National Defense, was a visitor and delivered an interesting address describing the work of the General Medical Board.

The absence of our president, Dr. Robert E. Schlueter was regretted by everyone. He had made all plans to be present but found at the last moment that his duties required his presence at Camp Hancock. He has been promoted to Major and Chief of the Surgical Staff of the base hospital at Camp Hancock. His message to the House of Delegates is an inspiring appeal for physicians to do all in their power to aid their country at this time and we publish it here in order that all may read his words. He says:

To the House of Delegates, Missouri State Medical Association:

I regret deeply my inability to meet with you at this time. When I accepted the presidency of the Association I had not thought of entering the Medical Reserve Corps. At that time there were few who had any conception of what this war would demand of us. Even at this time no one can foretell what must yet be done to accomplish the end which we have set out to attain.

I am extremely sorry that my plans of coming home to join you did not materialize. Although my leave of absence had been granted it became evident on the day before my intended departure from this station that I should remain here just at this time. It is essential that we must all sacrifice our personal and local interests and guard the interests of the whole.

I feel that you will pardon my neglect of the duties of this office to help our country in the present crisis; and I have but one recommendation which is: That you use every means at your disposal to bring every available medical man in Missouri into the service of his country.

With cordial greetings to all members and the hope that you will have a profitable and successful meeting, I am,

Very sincerely yours,

(Signed) ROBERT E. SCHLUETER.

Base Hospital, Camp Hancock, Augusta, Ga.

The House of Delegates approved these recommendations and ordered that a message be sent to Dr. Schlueter, informing him of this action and extending the congratulations and best wishes of the Association. In fulfilling that order the Secretary sent the following telegram to Dr. Schlueter: "The Missouri State Medical Association sends heartiest greetings and approves your recommendations. While we regret your enforced absence and your inability to preside at our 61st annual meeting, we know you have thought first of

your duty to your country and we take pride in your military record. We know you will acquit yourself in the service of your country with the distinction, success and thoroughness that have characterized all your professional achievements."

Excelsior Springs was chosen as the next place of meeting and the following officers were elected for 1918-1919: President, M. P. Overholser, Harrisonville; Vice Presidents, J. D. Brummell, Salisbury, J. C. Matthews, Springfield; T. G. Hetherlin, Louisiana; S. P. Child, Kansas City; John Isbell, Washington; Treasurer, J. Franklin Welch, Salisbury; Secretary, E. J. Goodwin, St. Louis.

The full report of the proceedings will appear in the July issue.

GOVERNMENT INSURANCE. PHYSICIANS IN SERVICE SHOULD INSURE

Uncle Sam has offered liberal provisions for insuring his soldiers and sailors in this great war, and at extremely moderate premium rates with convenient monthly payments. The Treasury Department has recently issued a pamphlet explaining the plan in minute detail. From this pamphlet we have excerpted the principal features which will interest members who expect to join the colors, and we urge every member who enlists in the Army or the Navy to be insured under the government plan at the time of his enlistment.

The insurance may be taken in any amount from \$1,000 to \$10,000, and the following persons may be insured when they become engaged in the active service of the War Department or the Navy Department: (1) commissioned officers; (2) enlisted men (meaning a person, male or female, enlisted, enrolled or drafted into active service in the military or naval forces of the United States, including noncommissioned and petty officers and members of training camps authorized by law); (3) members of the Army Nurse Corps (female) and members of the Navy Nurse Corps (female).

Any one or more of the following may be named as beneficiary: wife, husband, child, grandchild, brother, sister, adopted brother, adopted sister, stepsister, stepbrother, parent, grandparent, or stepparent of the insured, and

parent, grandparent, or stepparent of the insured's wife or husband.*

Age	Monthly Premium	Age	Monthly Premium
26.....	\$0.67	41.....	\$0.82
27.....	.67	42.....	.84
28.....	.68	43.....	.87
29.....	.69	44.....	.89
30.....	.69	45.....	.92
31.....	.70	46.....	.95
32.....	.71	47.....	.99
33.....	.72	48.....	1.03
34.....	.73	49.....	1.09
35.....	.74	50.....	1.14
36.....	.75	51.....	1.20
37.....	.76	52.....	1.27
38.....	.77	53.....	1.35
39.....	.79	54.....	1.44
40.....	.81	55.....	1.53

The premium rates for the ages of from 26 to 55 range from 67 cents to \$1.53 per \$1,000 monthly. The following table gives these rates from which can be calculated the amount of monthly payment for any sum of insurance up to \$10,000:

The premium increases annually according to this table until the change to another form when the premium will depend upon the plan then chosen.

The benefits of this insurance are very liberal. For total and permanent disability the insured will receive \$5.75 per month for each \$1,000 of insurance as long as the insured lives and is so disabled. In case of death each \$1,000 of insurance will pay to the beneficiary \$5.75 per month for 240 months.

This insurance applies to disabilities suffered from disease or injury whether sustained in the line of service or not. It continues in force after leaving the service, and is in addition to all other benefits that service in the military forces of the country gives, such as compensation for death or injuries or disease suffered in the line of duty; and it does not interfere with the right to service or retirement pay.

The insurance provision is not compulsory, but the government recommends that every person entitled to this benefit should take advantage of it. After the war is over the government will continue the control of this insurance. At first, we believe, it was understood that the government would turn over the plan of insur-

* A bill pending before Congress proposes to include in the permitted class, a father through adoption, mother through adoption, and any person who, at any time preceding Oct. 6, 1917, or the insured's enlistment or entrance into or employment in active service in the military or naval forces, has stood in *loco parentis* to the insured for a period of not less than five years.

ance after the war to regular insurance firms, but this last pamphlet of the Treasury Department definitely states that the government will continue to control the plan. However, within five years after the close of the war the insured must change to another form of insurance, which change can be made without regard to the then physical condition, and no medical examination will be required. The forms to which the change will be made are the usual insurance forms including ordinary life, twenty-payment life and endowment. An important protective feature of the government insurance provides that this insurance cannot be attached, assigned, or otherwise taken by creditors.

This is not automatic insurance. The government did provide automatic insurance in the beginning of the war, but this plan expired Feb. 12, 1918. Therefore all who desire to protect themselves and their dependents by this liberal and economical form of insurance must make application for it, and furthermore, there is a time limit of 120 days after entering service during which this application can be made. It is therefore dangerous to delay after one has entered the service. Make your application for this excellent insurance protection as soon as you enter the service. Application blanks may be procured from the Bureau of War-Risk Insurance, Washington, D. C., from the commanding officer, or from the insurance officer of the organization of which the medical officer is a member.

CORPORATION RIGHTS OF THE AMERICAN MEDICAL ASSOCIATION UPHELD BY ILLINOIS SUPREME COURT

The supreme court of Illinois has rendered its decision in the suit filed by Dr. G. Frank Lydston in 1911 charging that the Association was holding its elections illegally because its meetings were held outside of the state of Illinois. All the lower courts in which the case was heard rendered decisions favorable to the Association and now as a finality the supreme court decides the question for all time in favor of the Association. One paragraph from the opinion (*Journal of the American Medical Association*) reads:

It seems reasonably to follow that if a corporation not organized for pecuniary profit

may hold meetings at a stated time outside of the State of Illinois, composed of delegates selected by the constituent associations, for the transaction of business of the corporation, it is not unlawful to authorize and provide for the election by said house of delegates of trustees of the corporation. The American Medical Association was organized solely for the purpose of the advancement of medical science. Its purpose was to improve methods for the treatment and prevention of diseases of the human race. Its usefulness for these purposes would be seriously interfered with, if not absolutely destroyed, if it could not provide for the election of trustees from the most efficient men in the association throughout the United States, by delegates selected by the constituent associations from the various States in the Union. Such authority to the house of delegates is conferred by the by-laws and is not in conflict with or prohibited by the constitution or laws of Illinois relating to corporations not for pecuniary profit.

This sets at rest all doubt as to the legality of the proceedings of the American Medical Association, and of similar corporations "not for profit," and satisfactorily disposes of the imputation that the method of conducting the elections was not fair to the "rank and file."

NEW AND NONOFFICIAL REMEDIES

Under this caption we publish new articles that have been accepted by the Council on Pharmacy and Chemistry. We suggest that members write the advertisers for more complete information concerning the articles—*not forgetting to state that your attention has been called to the article by this item in your JOURNAL.* The following articles have been approved since our last issue and accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

CHLORCOSANE.—A liquid, chlorinated paraffin, containing its chlorine in stable (non-active) combination. It is used as a solvent for dichloramine-T and is itself without therapeutic action.

CHLORCOSANE-CALCO.—A brand of chlorcosane containing from 31 to 35 per cent. of combined chlorine. The Calco Chemical Co., Bound Brook, N. J.

CHLORCOSANE-MONSANTO.—A brand of chlorcosane containing from 27 to 30 per cent. of combined chlorine. Monsanto Chemical Co., St. Louis, Mo., (*Journal of the A. M. A.*, May 18, 1918, p. 1459).

MILITARY SURVEY OF THE MEDICAL PROFESSION

Through the courtesy of the *Journal of the American Medical Association* we publish in this issue¹ a comprehensive survey of the military status of the medical profession of Missouri. Similar data for all the states was published in the same issue. This information will be welcomed by all state and county society secretaries as well as by all members of the organization. It is one of the best services the American Medical Association has performed for the profession in these trying times, and we can do no better than quote the announcement from the *Journal of the American Medical Association* as follows:

THE WAR SERVICE OF THE MEDICAL PROFESSION

A Survey Including the Names of Civilian Physicians in Military Service and a Tabulation of Statistics by Counties and States

The same principle that requires each state or community to furnish its quota of men for the Army should also apply in securing physicians for the Medical Corps. To determine to what extent the various parts of the country had met this responsibility, the American Medical Association last winter compiled a list, by states and counties, of the physicians who had accepted commissions in the Medical Reserve Corps. This first survey was completed in March, and the matter down to and including Maryland was published in the American Medical Association *Bulletin*. It was the intention to publish the rest of this survey in the next issue of the *Bulletin* without delay. However, as the preliminary survey included only physicians who had accepted their commissions up to January, 1918, and therefore was not up to date, the War Committee of the American Medical Association directed that this preliminary survey be revised and completed to date of publication so far as possible. The War Committee, believing that all physicians should have this information, decided to publish it in THE JOURNAL, rather than in the *Bulletin*, the regular circulation of which is limited to the presidents and secretaries of the component county and constituent state associations.

Another reason for this action by the War Committee was the receipt of Surgeon-General Gorgas' letter² of April 3, requesting the cooperation of the American Medical Association. The Surgeon-General stated: "The additional increase in the Army during the next few months will probably necessitate the service of 5,000 physicians who as yet have not made application for a commission in the Medical Reserve Corps . . . it is estimated that the Medical Reserve Corps will need a steady increase of at least 2,500 applicants a year during the continuance of the war." Paragraphs five and six of his letter read:

"5. It is earnestly desired that the interests of the civil communities be conserved as far as possible and that no enlistments in the Medical Reserve Corps be made that would work serious hardship upon any community, manufacturing concern or other civil activity by taking from such community, manufacturing concern or other civil activity, physicians whose services are needed for the efficient and competent care of the civil population or the employees of large concerns.

"6. To this end the department desires the closest cooperation and assistance of the American Medical Association, its officers and its allied organizations, believing that through its organizations the additional increment to the Medical Reserve Corps can be most satisfactorily obtained and the necessary increment for replacements be secured without in any way depriving any community of physicians whose services are necessary to its welfare and without depriving any manufacturing or other concern of its medical personnel when such personnel cannot be spared."

It is very desirable that physicians should be familiar with the information contained in the survey in order that they may better help in carrying out effectively the sentiments expressed in paragraphs five and six of the Surgeon-General's letter. All the data concerning each state are assembled in a table accompanying the matter for the state. These tables make it possible at a glance to determine the important facts regarding each county: the area, population, total number of physicians, number of physicians under 45 and under 55 years of age, number of women physicians, total number of physicians in the county, number of physicians in the county society, and the number and names of physicians who are already under commission in the Army or in the Navy. The last column of the table is the most important one. It lists the number of physicians in the federalized National Guard, as well as commissioned medical officers in the Reserve Corps of the Army and the Navy. It does not include the regular Medical Corps of either the Army or the Navy; those who have been commissioned but have not yet accepted their commissions; or those who are

1. See page 221.

2. *The Journal of the American Medical Association*, April 13, 1918, p. 1100.

serving as contract surgeons. It must be borne in mind, therefore, that this last column of the table does not include those who have made application for commission, or even those who have been awarded a commission unless that commission has been accepted. At the present writing, May 24, there are many pending applications.

The preparation of this survey has been a difficult undertaking. Undoubtedly the data are not perfect: some names may have been included that should not have been; more likely, some have been omitted that should have been included. We ask our readers, and especially county secretaries, to check over the Honor Roll and the tabular data covering their particular county, and to send corrections or comments to Dr. A. R. Craig, Secretary of the American Medical Association, 535 N. Dearborn Street. It is urged that this be done promptly, so that a corrected and amplified survey may then be made available to the component societies of every state. This survey for component societies will be in the form of a list of registered physicians for the territory covered; on it will be indicated not only those physicians who have accepted commissions, but also those who have made application for commission, those to whom commissions have been granted but who have not yet accepted them, etc. Those coming within the age limits for the Medical Corps and the Medical Reserve Corps of both the Army and Navy will also be indicated.

In addition to the table in each state, a similar table will be found at the end of the survey covering the whole country. This latter table, besides assembling the totals for each state, shows the percentage of the medical profession already commissioned in each state.

We may estimate that in addition to the Regular Corps, a total of 30,000 medical officers will be required for the present year—27,500 for the Army, and 2,500 for the Navy. The number of physicians in the United States, according to the new American Medical Directory now on the press, is 146,500. Hence it will take between 20 and 21 per cent. of the total number of physicians of the country to supply the 30,000. This means as a minimum one in five. To supply one out of every five physicians to the Government, if managed rightly, ought not to be a severe strain on our profession. There are many communities and industrial centers that can not spare any physician; on the other hand, there are many that can easily spare two out of five. This is especially true of large cities.

Finally, the purpose of this survey is to make available to physicians in every community of the country information which may assist them in determining whether or not their locality is meeting its obligation in providing the needed number of physicians for military duty. The county societies naturally are best qualified to pass on the actual needs of the civilian population of their territory, as well as to furnish information relative to the personnel of the profession. For evident reasons the county society may not always be able to decide who should and who should not volunteer. Such problems can sometimes be better worked out through the cooperation of the county society with the War Committee of the state association and of the American Medical Association. With the state and county organizations cooperating, there is little doubt that each state will be able to supply its quota without serious hardship on either the civilian population or individual members of our profession.

NOTE.—Many names were added after the Honor Roll was in page form. These are inserted under the respective counties but out of alphabetical arrangement. *They are in italics.*—ED.

MISSOURI STATE MEDICAL ASSOCIATION

Officers 1917-18

Robt. E. Schluter, President.....	St. Louis
Vice Presidents—	
J. P. Henderson.....	Kansas City
H. A. Lowe.....	Springfield
Frank B. Long.....	Sedalia
W. A. Clark.....	Jefferson City
F. W. Colton.....	Van Buren
E. J. Goodwin, Secretary.....	St. Louis
Gail D. Allen, Treasurer.....	Lamar

Councilor Districts and Officers

A. R. McComas, Chairman, Sturgeon; E. J. Goodwin, Secretary, St. Louis.

First District.—Holt, Atchison and Nodaway counties. Eugene L. Crowson, Councilor, Pickingering.

Second District.—Buchanan and Andrew counties. O. C. Gebhart, Councilor, St. Joseph.

Third District.—Harrison, Worth, Gentry and DeKalb counties. G. W. Whitely, Councilor, Albany.

Fourth District.—Grundy, Sullivan, Mercer and Putnam counties. J. B. Wright, Councilor, Trenton.

Fifth District.—Clark, Scotland and Schuyler counties. J. R. Bridges, Councilor, Kohoko.

Sixth District.—Adair, Knox and Lewis counties. P. F. Cole, Councilor, Ewing.

Seventh District.—Shelby, Marion and Ralls counties. Jacob D. Smith, Councilor, Shelbina.

Eighth District.—Lincoln, St. Charles, St. Louis and Pike counties. Leander W. Cape, Councilor, Maplewood.

Ninth District.—Audrain, Boone, Howard, Callaway, Warren and Montgomery counties. A. R. McComas, Councilor, Sturgeon.

Tenth District.—Macon, Randolph and Monroe counties. Don A. Barnhart, Councilor, Huntsville.

Eleventh District.—Chariton, Carroll, Livingston and Linn counties. G. W. Hawkins, Councilor, Salisbury.

Twelfth District.—Platt, Clay, Ray, Clinton, Caldwell and Daviess counties. Spence Kedman, Councilor, Platte City.

Thirteenth District.—Jackson County. F. E. Murphy, Councilor, Kansas City.

Fourteenth District.—Lafayette, Saline and Cooper counties. C. T. Ryland, Councilor, Lexington.

Fifteenth District.—Cass and Johnson counties. H. S. Crawford, Councilor, Harrisonville.

Sixteenth District.—Bates, Vernon, Barton, Cedar and Dade counties. E. N. Chastain, Councilor, Butler.

Seventeenth District.—Pettis, Henry, Benton, St. Clair and Hickory counties. W. J. Ferguson, Councilor, Sedalia.

Eighteenth District.—Miller, Moniteau, Morgan and Camden counties. J. B. Norman, Councilor, Tipton.

Nineteenth District.—Cole, Osage, Maries and Gasconade counties. S. V. Bedford, Councilor, Jefferson City.

Twentieth District.—Franklin County and St. Louis City. A. H. Hamel, Councilor, St. Louis.

Twenty-First District.—Jefferson, Ste. Genevieve and Perry counties. G. M. Rutledge, Councilor, Ste. Genevieve.

Twenty-Second District.—Scott, Madison, Cape Girardeau, Mississippi and Bollinger counties. Garnett S. Cannon, Councilor, Fomfelt.

Twenty-Third District.—Dunkin, Pemisicot and New Madrid counties. J. H. Timberman, Councilor, Marston.

Twenty-Fourth District.—Wayne, Ripley, Butler, Carter, Shannon and Stoddard counties. Wm. Spaulding, Councilor, Poplar Bluff.

Twenty-Fifth District.—Washington, Reynolds, Iron and St. Francis counties. O. A. Smith, Councilor, Farmington.

Twenty-Sixth District.—Crawford, Phelps, Pulaski, Laclede and Dent counties. W. H. Breuer, Councilor, St. James.

Twenty-Seventh District.—Howell, Ozark, Oregon, Texas, Wright and Douglas counties. H. C. Shutte, Councilor, West Plains.

Twenty-Eighth District.—Dallas, Greene, Lawrence, Barry, Stone, Christian, Webster, Polk and Taney counties. T. O. Klinger, Councilor, Springfield.

Twenty-Ninth District.—McDonald, Newton and Jasper counties. R. L. Wills, Councilor, Neosho.

MISSOURI—Continued

County	Area, Square Miles	Sq. Miles per Physician	Population Est. 1917	Population per Phys.	Total No. Physicians	Total Women Phys.	Physicians Under 45	Physicians Under 55	Members of Co. Society	Commiss'd in M.R.C., etc.
Butler.....	699	25.9	23,435	867	27	..	16	21	15	5
Caldwell.....	433	13.1	14,605	442	33	..	11	20	19	4
Callaway.....	808	20.2	24,400	610	40	..	14	28	23	4
Camden.....	687	52.8	11,582	890	13	..	6	10	6	..
Cape Girardeau.....	580	10.9	30,033	566	53	1	21	36	30	3
Carroll.....	703	27.0	23,098	888	26	1	9	12	19	3
Carter.....	506	63.2	5,504	688	8	..	1	5	4	..
Cass.....	721	19.0	22,973	604	38	..	17	32	31	5
Cedar.....	498	19.9	16,080	643	25	1	8	17	15	..
Chariton.....	768	27.4	23,563	839	28	..	10	20	21	1
Christian.....	553	32.5	15,832	931	17	..	7	10	10	3
Clark.....	498	23.7	12,811	610	21	..	4	12	13	1
Clay.....	402	7.6	21,323	402	53	..	24	39	36	4
Clinton.....	423	16.3	15,297	588	26	..	10	18	15	1
Cole.....	389	13.0	22,963	765	30	..	15	26	21	2
Cooper.....	558	19.9	20,311	725	28	..	13	13	19	1
Crawford.....	747	53.3	14,025	1,001	14	1	6	8	10	1
Dade.....	501	29.3	15,613	918	17	..	6	13	4	2
Dallas.....	543	38.8	13,181	941	14	..	4	7	3	..
Daviess.....	564	20.9	17,605	652	27	..	11	18	4	5
DeKalb.....	425	23.6	12,531	696	18	1	9	9	9	..
Deut.....	746	82.9	13,432	1,492	9	..	3	4	5	..
Douglas.....	804	73.1	16,664	1,514	11	..	4	6	5	..
Dunklin.....	530	10.4	36,621	718	51	..	23	40	24	9
Franklin.....	879	20.4	29,830	693	43	..	22	33	27	8
Gasconade.....	514	30.2	13,247	779	17	..	10	15	12	1
Gentry.....	490	17.1	16,820	600	28	1	13	17	14	2
Greene.....	667	5.5	71,946	594	121	..	54	79	77	14
Grundy.....	433	14.4	16,744	558	30	4	17	19	20	3
Harrison.....	721	20.0	20,466	568	36	1	14	16	17	1
Henry.....	744	17.3	27,242	633	43	2	10	27	30	3
Hickory.....	407	45.2	8,741	971	9	..	4	4	6	..
Holt.....	446	15.4	14,539	501	29	..	13	19	22	1
Howard.....	468	19.5	15,653	668	24	..	7	15	23	3
Howell.....	915	35.2	21,665	810	26	1	6	16	8	1
Iron.....	553	46.1	8,563	713	12	..	4	9	6	3
Jackson.....	610	0.6	347,397	363	958	41	491	621	385	154
Jasper.....	635	4.8	94,099	697	135	5	51	98	68	8
Jefferson.....	681	25.2	29,458	1,091	27	..	11	19	13	1
Johnson.....	831	18.9	26,297	597	44	..	10	27	22	6
Knox.....	514	22.3	12,403	539	23	..	8	16	12	2
Laclede.....	753	37.6	17,976	898	20	..	5	14	10	..
Lafayette.....	612	13.0	30,154	641	47	1	23	32	34	3
Lawrence.....	609	15.2	26,583	664	40	1	16	34	25	3
Lewis.....	504	18.0	15,514	554	28	..	15	21	19	4
Lincoln.....	607	17.8	17,033	500	34	..	9	24	4	6
Linn.....	626	17.4	25,253	701	36	1	23	25	33	5
Livingston.....	531	17.1	19,453	627	31	..	9	21	19	2
McDonald.....	527	37.6	13,539	967	14	..	2	6	4	2
Madison.....	809	17.6	30,868	671	46	..	15	29	31	5
Marion.....	499	38.4	12,218	939	13	..	7	8	10	..
Maries.....	520	43.3	10,432	869	12	..	6	9	8	3
Marion.....	436	8.1	33,666	623	54	1	26	39	23	6
Mercer.....	453	23.8	12,335	649	19	..	10	16	13	5
Miller.....	593	37.1	17,833	1,114	16	..	7	13	10	2
Mississippi.....	413	17.9	16,540	719	23	..	11	16	13	2
Moniteau.....	410	24.1	14,375	845	17	..	7	11	16	2
Monroe.....	666	28.9	18,304	795	23	..	12	18	12	3
Montgomery.....	514	20.6	15,604	624	25	..	8	18	13	4
Morgan.....	614	38.4	13,365	835	16	..	8	13	6	2
New Madrid.....	653	24.1	25,478	943	27	..	17	24	12	3
Newton.....	622	22.2	27,234	972	28	1	7	18	17	..
Nodaway.....	871	16.4	28,833	544	53	..	19	34	32	5
Oregon.....	778	70.7	15,245	1,385	11	..	4	7	1	..
Osage.....	593	14.8	14,420	360	40	..	12	20	15	3
Ozark.....	746	82.8	11,926	1,325	9	..	4	5	3	..
Pemisicot.....	456	14.7	24,992	806	31	..	19	25	19	3
Perry.....	462	24.3	14,898	784	19	..	11	16	8	3
Pettis.....	685	12.2	34,988	624	56	1	28	47	37	9
Phelps.....	670	41.9	16,964	1,060	16	1	6	11	11	2
Pike.....	653	22.5	22,556	777	29	1	14	23	9	7
Platte.....	415	18.9	14,429	655	22	..	6	16	16	4
Polk.....	641	22.1	21,561	743	29	..	15	16	22	2
Pulaski.....	542	30.1	12,199	677	18	..	9	9	12	2
Putnam.....	517	30.4	14,308	841	17	2	8	11	10	1
Ralls.....	418	20.9	13,368	668	20	..	5	9	5	1
Randolph.....	491	8.9	27,451	499	55	..	17	39	24	8
Ray.....	565	21.0	21,451	794	27	..	10	18	16	1
Reynolds.....	828	92.0	10,637	1,181	9	..	6	7	9	1
Ripley.....	627	78.4	1,399	174	8	..	3	5	3	2
St. Charles.....	535	15.3	24,854	710	35	..	15	29	15	8
St. Clair.....	706	28.6	16,412	683	24	1	7	15	16	3
Ste. Genevieve.....	481	43.7	10,787	980	11	..	5	8	9	2
St. Francois.....	458	11.2	44,267	1,079	41	..	16	33	25	5

MISSOURI

County	Area, Square Miles	Sq. Miles per Physician	Population Est. 1917	Population per Phys.	Total No. Physicians	Total Women Phys.	Physicians Under 45	Physicians Under 55	Members of Co. Society	Commiss'd in M.R.C., etc.
Adair.....	571	21.1	23,407	866	27	..	10	18	9	3
Andrew.....	428	21.4	15,282	764	20	..	10	14	8	..
Atchison.....	528	29.3	13,604	755	18	..	6	9	12	..
Audrain.....	685	22.1	22,069	711	31	..	12	23	25	1
Barry.....	784	26.1	23,869	795	30	1	6	19	16	2
Barton.....	596	28.4	16,747	797	21	1	6	11	12	2
Bates.....	870	24.2	25,899	718	36	..	16	24	26	6
Benton.....	745	41.4	14,881	830	18	..	9	13	15	2
Bollinger.....	609	40.6	14,576	971	15	..	9	13	5	1
Boone.....	688	10.7	31,911	498	64	2	23	44	35	6
Buchanan.....	408	2.3	101,331	562	180	3	95	151	107	21

1. Includes St. Joseph, population 86,498; physicians 166 [M.R.C. 17].
 2. Includes Springfield, population 41,169; physicians 111 [M.R.C. 13].
 3. Includes Kansas City, population 305,816; physicians 903 [M.R.C. 152].
 4. Includes Joplin, population 33,400; physicians 69 [M.R.C. 4].

County	Area, Square Miles	MISSOURI		Continued						
		Sq. Miles per Physician	Population Est. 1917	Population per Phys.	Total No. Physicians	Total Women Phys.	Physicians Under 45	Physicians Under 55	Members of Co. Society (Commis'd in M.R.C., etc.)	
St. Louis City..	61	0.03	765,630	444	1,730	75	1,070	1,412	832	304
St. Louis.....	487	2.0	106,049	460	239	3	42	62	44	9
Saline.....	754	12.8	29,448	499	59	..	23	36	30	3
Schuyler.....	369	19.3	9,062	566	16	..	6	9	10	1
Scotland.....	439	24.4	11,869	659	18	..	7	11	11	2
Scott.....	419	10.7	29,145	747	39	..	20	36	18	5
Shannon.....	992	124.0	11,585	1,448	8	..	4	5	2	1
Shelby.....	509	18.2	14,864	530	28	..	11	19	21	6
Stoddard.....	815	22.6	30,097	836	36	..	23	35	8	7
Stone.....	510	63.7	12,775	1,596	8	..	5	6	6	..
Sullivan.....	649	21.6	18,598	619	30	..	8	13	12	1
Taney.....	655	93.5	9,134	1,304	7	..	2	5	3	1
Texas.....	1,159	52.7	21,458	975	22	..	9	16	17	4
Vernon.....	839	20.5	28,827	703	41	..	12	25	31	2
Warren.....	410	37.3	9,123	829	11	..	3	8	4	..
Washington.....	741	61.7	13,378	1,114	12	..	6	7	1	..
Wayne.....	775	36.9	15,181	722	21	..	9	14	7	2
Webster.....	585	34.4	17,914	1,053	17	..	6	8	13	1
Worth.....	265	18.9	8,007	571	14	..	10	12	2	2
Wright.....	677	30.8	18,895	858	22	..	8	10	12	1
Totals.....	68,664	11.3	3,537,819	583	6,063	156	2,956	4,375	3,136	699

HONOR ROLL

Adair County

KIRKSVILLE—Frank Lester Bigsby; Ezra Clarence Grim; Wilford Wayne Martin.

Audrain County

VANDALIA—Warren Wilson Bland.

Barry County

CASSVILLE—William Thomas Jefferson Bailey. SHELL KNOB—Lottie Edward Gilbert.

Barton County

IANTHA—George Everett Locker. LAMAR—Gail Darwin Allee.

Bates County

ADRIAN—Edward Everette Robinson. AMORET—John Asa Corn. BUTLER—Robert E. Crabtree; Charles Anne Lusk. HUME—W. A. Williams. RICH HILL—Herbert Wellington Inslay. MAYESBURG—William H. Allen. ROCKVILLE—Charles Ellereththe Powers.

Benton County

COLE CAMP—Norman Anthony Schwald. WARSAW—James Alexander Logan.

Bollinger County

PATTON—Henry Thomas O'Kelley.

Boone County

ASHLAND—Finis Clifford Suggert. COLUMBIA—William Patton Dy-sart; Otis Andrew Moore; Mazyek P. Havenel; Carl Miller Sneed. ROCHEPORT—Paul Shaeffer Mabry.

Buchanan County

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Caldwell County

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Callaway County

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Cape Girardeau County

CAPE GIRARDEAU—John W. Berry; Paul Raymond Williams. FRUITLAND—Chester Arthur Poe.

Carroll County

CARROLLTON—Harold Blaine Scovern. DEWITT—Bid Cooper Cole; Marcus Rolla Damron.

Cass County

CREIGHTON—Edgar McDonnell Griffith. HARRISONVILLE—Harry Struthers Crawford. PLEASANT HILL—Wilford Andrew Fair; Rowland Paxton Yeagle. RAYMORE—Wellman Franklin Chaffin.

Cedar County

STOCKTON—Burr Hamilton Emerson.

Chariton County

SALISBURY—Ora Francis McKittrick.

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BILINGS—Frederick H. Brown. CLEVER—Floyd Herman Maples; Larkin E. Williams.

Clark County

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Clay County

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Clinton County

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Dade County

GREENFIELD—Jerome Lee Rawhauser. LOCKWOOD—William Mathias Hoel.

Daviess County

GALLATIN—Earl Weldon Netherton; Marshall Ashby Smith. PAT-TONSBURG—Frank Hedges; John Wesley Nigh. WINSTON—Charles Clinton Coats.

Dunklin County

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Harrison County

MARTINSVILLE—Alfred Louis Wessling.

Henry County

CLINTON—Samuel William Woltzen.

Hoddard County

BLOOMFIELD—Hugh Vincent Ashley.

Holt County

OREGON—Samuel E. Simpson.

Howard County

FAYETTE—Thomas Carter Richards; Merrill Neville Smith. GLAS-COW—Wesley Romeo Hawkins.

Howell County

WEST PLAINS—A. H. Thornburgh.

Iron County

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INDEPENDENCE—Harry Edgar Braun.

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Jefferson County

DE SOTO—Charles Earl Fallet.

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HOLDEN—Charles Emmanuel Briscoe.

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Livingston County

CHILLICOTHE—Calvin Lee Woolsey.

Macon County

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McDonald County

ROCKY COMFORT—David Nathaniel Dabbs. SOUTH WEST CITY—John Pierce Beeson.

Mercer County

PRINCETON—Clarence J. Laws; Clay Eli Mullinax; John Morris Perry. RAVANNA—Fred Cottier Callaway. SALINE—Thomas John Wilkin.

Miller County

BRUMLEY—Preston Thompson. OLEAN—Lansford Monroe Spalding. ST. ELIZABETH—Lawrence Edward Gausepehl.

Mississippi County

CHARLESTON—John Calhoun Boone; Mitchell Hudson Shelby.

Moniteau County

JAMESTOWN—Cyrus P. McRaven; Logan Lancaster Latham.

Monroe County

HOLIDAY—Wilford Henry Urquhart. MONROE CITY—John Albert Malley. STOUTSVILLE—John Michael Wilson.

Montgomery County

MIDDLETOWN—Winfield Newton Floyd. MINNEOLA—Douglas Wyatt. MONTGOMERY CITY—Carl Bibb Hudson; Buell Fountain Menefee.

Morgan County

BARNETT—James Frederick Leslie. VERSAILLES—Harry Nelson Lutman.

New Madrid County

LJLBOURN—Edward Bogard. MARSTON—Claude McRaven; John Harrison Timberman.

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Osage County

BONNOTS MILLS—Ezra Leslie Meads. CHAMMOIS—Hans Schaerrer. META—Samuel Everett Gaston.

Pemiscot County

CARTHERSVILLE—George W. Phipps; Ira Leon Seurlock. PAS-COLA—James Knox Rosson.

Perry County

CROSTOWN—Kirby Curtis Garner. LITHIUM—John Harvey Graff. PERRYVILLE—Francis Meredith Vessells.

Pettis County

GREEN RIDGE—Eugene Albert Heibner. LA MONTE—Ernest Mitchell. SEDALIA—William Albert Beckemeyer; Gulph Walden Grove; Charles Richard Long; Frank Barnes Long; Hardy David Havard; Clive Sidney McGinnis; Henry Albert Meyers.

Phelps County

ROLLA—Stuart Lee Baysinger. ST. JAMES—William Hayes Breuer.

Pike County

BOWLING GREEN—James Brown Riggs. FRANKFORT—Jacob Jenkin Kennedy. LOUISIANA—Charles P. Lewellyn; Ira Hamilton Miller; Joseph Bryson Unsell; Sylvanus Holsey Warfield. NEW HARTFORD—Ray Jackson Gay.

Platte County

FARLEY—Lee Hanville Winemiller. PLATTE CITY—Grundy Cockrill Coffey. WALDRON—Cadwallader Hamilton Atehison. WESTON—Lewis C. Calvert.

Polk County

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Pulaski County

BLOODLAND—Cyrus Mallette.

Putnam County

LEMONS—Benjamin Elden Cobb.

Ralls County

PERRY—Charles Diek Manefee.

Randolph County

HIGBEE—Roscoe C. Campbell. JACKSONVILLE—Carl C. January. MOBERLY—Godfrey O. Cuppaidge; Thomas Simpson Fleming; Paul Campbell Davis; Stephen Thomas Ragan; Ralph Rayburn Simmons; Roderick Dhu Streeter.

Ray County

ORRICK—Robert Sheetz.

Reynolds County

CENTERVILLE—Loren B. Ralls.

Ripley County

DONIPHAN—John Robert Hume; Carter Atwater Proctor.

Saline County

MARSHALL—Guthrie Eugene Scrutchfield. SWEET SPRINGS—Clyde Wallace Parsons.

LITTLE ROCK—William Lowery Sharp.

Schuyler County

LANCASTER—William Advance Potter.

Scotland County

MEMPHIS—Abram Edson Platter. RUTLEDGE—Wallace Sidney Petty.

Scott County

CHAFFEE—William Ozro Finney. BLODGETT—Roy Kinkrough Ogilvie. SKESTON—Trentis V. Miller; George W. H. Presnell; Abraham Lincoln Stepp.

Shannon County

KOLLER—William Thomas Eudy.

Shelby County

CLARENCE—Stanley Montjoy Hall; Dennis Edward Singleton. LENTER—Adolph Mitchell Wood. SHELBYNA—Richard S. Battersby; Florian Vaughn. SHELBYVILLE—George E. Farr.

St. Charles County

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St. Clair County

APPLETON CITY—Gerald C. Bates; Duke Gldrner Divine. OSCEOLA—Charles Alfred Smith.

St. Francois County

ELVINS—Edwin Eugene Whiteside. FARMINGTON—William George Patton; George Lancaster Watkins. LEADWOOD—Reuben Appleberry; James William Huffman.

St. Genevieve County

BLOOMSDALE—Frank Alvin Elders. COFFMAN—George McClellan Hamilton. ST. GENEVIEVE—Louis Joseph Birsner.

St. Louis County

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St. Louis City County

ST. LOUIS—Frederick Book Abbott; Robert D. Alexander; Nathaniel Allison; Carl Jacob Althaus; Claude Lester Armstrong; John Hinton Armstrong; Joseph T. Axliue; Treston R. Ayars.

Oscar Frank Baerens; Frederick Warren Bailey; Elbert Baker; Roscoe L. Barlow; Charles M. Bauman; Edmond Bechtold; Hubert Bowler Beedle; Howard H. Bell; Grover Cleveland Black; Joseph M. Blackmore; Vilray Papin Blair; Lux H. Bock; David C. Bosserman; Thomas Kinsey Bowles; Oscar Franklin Bradford; William Charles Bradley; Howard Conley Brashear; Joseph Francis Bredech; Harry L. Brenser; William Carr Broadhead; Henry Spence Brookes Jr.; Theodon Prewitt Brookes; John Young Brown; Wilbur Kenneth Brown; Richard Shepard Bryan; James R. Bunch; Charles Henry Burdick; Cyrus Edgar Burford; Emil H. Burgher; Robert Burns Jr.; Stanley S. Burns; Montrose T. Burrows; Robert E. Byrns.

James Graham Calhoun; Solon Cameron; Cecil Stevenson Campbell; Oliver Howard Campbell; Harry D. Carley; William Marshall King Chattle; Ira R. Clark; Horace Fletcher Cleveland; Malvern B. Clopton; John Howard Cochran; Ernest Linwood Coffin; James Thomas Cook; Ralph L. Cook; Edward Louis Cooley; Thomas Egner Cooper; William Thomas Coughlin; Harry Sturgeon Crossen; Robert M. Cullison; William Devine Davis; William Thomas Dean; Bradford French Dearing; Elliott Knight Dixon; James Clifford Donahue; Thomas Leo Draney; Clifton Rogers Dndley; Clyde Percy Dyer.

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Ferdinand Franklin Haas; Frederick Hagler; Claude Dickerson Halley; Albert H. Hamel; Clarence Orval Hamilton; Schuyler Colfax Harbour; Louis Grayson Harney; Nelson Joy Hawley; Solon Earl Haynes; Charles Henry Hecker; Lloyd Lewis Heid; Aloys Severin Heithaus; Walter E. Hennerich; Harold C. Herrick; Charles Edward Herriot; Scott Heuer; George Washington Heuman; Abraham Dana Hobson; Marc Ray Hughes; James Eldridge Hurt; Joseph Lewis Hutton; Joseph Charles Hynes; William Brides Inman.

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Llewellyn Sale; William Joseph Say; Joseph Charles Schafer; Abe Lewis Scheff; Robert Ernst Schlueter; David E. Schmalhorst; Irwin Henry Schmidt; Edgar Ferdinand Schmitz; Louis Walter Schreiber; Harry William Schumacher; Sidney Isaac Schwab; Gabriel Seelig; Claude L. Sellers; Omar Richard Sevin; Arthur Henry Sewing; James Wilbur Shankland; Novelle Wallace Sharpe; Algie Ray Shreffler; Charles Henry Shumaker; Frederick Casimir Simon; Alvin Hiram Sippy; William I. Smith; Raymond Mills Spivay; William August Henry Steinmann; John Walker Stewart; Joseph Edgar Stewart; Samuel Smith Stewart; Arthur Edgar Strauss; Orril Le Grand Suggat.

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Stoddard County

ADVANCE—Charles Moore. BELLE—Grover Clayton Johnson. BERNIE—Robert William Sayre. BLOOMFIELD—John Wilson. DEXTER—William C. Dieckman; Frank LaRue. LEORA—Edward Ford.

Sullivan County

OSGOOD—Ursa Cleveland Weston.

Taney County

BRADLEYVILLE—Eugene Bernhardt Munier.

Texas County

CABOOL—Louis Martin Edens. HOUSTON—Elmer P. Blankenship. LICKING—Leslie C. Randall. SUMMERVILLE—Luther Hayes Wallen.

Vernon County

BRONAUGH—Fred Clayton Albright. NEVADA—Douglass Haggard.

Wayne County

LEEPER—Roy Jefferson Owens. PIEDMONT—Lee Egbert Toney.

Webster County

MARSHFIELD—John Rufus Bruce.

Worth County

DENVER—Lewis H. Long. GRANT CITY—Welcome Blaine Tilton.

Wright County

MOUNTAIN GROVE—Edward Christian Wittwer.

LICENSED BY THE MISSOURI STATE BOARD OF HEALTH

By Examination at St. Louis, March 19, 20, 21, 1918

Name	School	Home Address
Ambrose, Elmer Cleo.....	National U. Arts and Sciences.....	Gravity, Iowa
Bailey, Homer Edw.....	National U. Arts and Sciences.....	St. Louis
Baker, Clark Everett.....	Vanderbilt University.....	St. Louis
Brickey, Paul Ashland.....	St. Louis University.....	St. Louis
Bristow, Arthur Shaw.....	Rush Medical College.....	Princeton, Mo.
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Matlock, Wallace L.....	National U. Arts and Sciences.....	St. Louis
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Oxford, Seba E.....	National U. Arts and Sciences.....	Cave in Rock, Ill.
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Reilly, Charles.....	National U. Arts and Sciences.....	St. Louis
Rund, Emmett Henry.....	National U. Arts and Sciences.....	St. Louis
Ryburn, John Patrick.....	National U. Arts and Sciences.....	Meadow View, Va.
Staley, Forest Hy.....	Washington University.....	St. Louis
Stokes, James Bell.....	National U. Arts and Sciences.....	Excello, Mo.
Taylor, Harry O.....	National U. Arts and Sciences.....	Golconda, Ill.
Thompson, Arthur M.....	St. Louis University.....	St. Louis
Wenzel, Peter Spuck.....	National U. Arts and Sciences.....	St. Louis
Whitaker, George Washington.....	National U. Arts and Sciences.....	Elco, Ill.
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Winn, William Murray.....	National U. Arts and Sciences.....	St. Louis
Winterer, Charles Henry.....	National U. Arts and Sciences.....	St. Louis

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Green, Bernard Law.....	Tennessee.....	St. Louis
Gross, Samuel S.....	Kansas.....	Excelsior Springs, Mo.
Hale, John Peter.....	Illinois.....	Alton, Ill.
Harned, Clarence O.....	Kentucky.....	Forsyth, Mo.
Henry, James Clayton.....	Illinois.....	East St. Louis, Ill.
Horan, William A.....	Tennessee.....	Bellevue, Mo.
Maupin, Howard Steward.....	Illinois.....	Shelbina, Mo.
Meyer, August Albert.....	Kansas.....	Lockwood, Mo.
Naylor, N. E.....	Kansas.....	Kansas City, Mo.
Richmond, Albert C.....	Iowa.....	Evening Shade, Mo.
Shelton, Edw. Cass.....	Iowa.....	St. Louis
Spaulding, John.....	Indiana.....	Poplar Bluff, Mo.
Swope, Opie W.....	West Virginia.....	Kansas City, Mo.
Wedig, John Harrison.....	Illinois.....	St. Louis

GIFT TO THE RED CROSS FOR MEDICAL RESEARCH IN FRANCE

The Atlantic Division of the American Red Cross has announced that hereafter all expenditures for vivisection would come from a fund which had been contributed by an individual. The announcement, which came here from Harvey D. Gibson, general manager of the Red Cross in Washington, said that this fund also would be used to reimburse the treasury of the organization for money already spent in experiments on living animals. Mr. Gibson's statement in part was as follows:

Considerable public and private criticism has been made of an appropriation of the American Red Cross in August, 1917, for medical research work in France, because partly involved in this work was experimentation on living animals for the purpose of finding methods of prevention and remedies for new and strange diseases among soldiers. This appropriation was made at a time of emergency, on the recommendation of army medical officers and of a number of eminent scientists in this country. Prompt action was necessary, and it seemed to officers of the Red Cross at the time that the use of money in this way was proper from the Red Cross point of view, for it would be difficult to imagine any more imperative duty on the Red Cross than to seek for every means of prevention and remedy for sickness among soldiers.

The Red Cross did not, as has been stated, appropriate this money for abstract medical research and experimentation. It was to be used for the direct and immediate purpose of finding ways to prevent or cure wounds and sickness among American soldiers. It was strictly a war measure. It develops, however, that there are large numbers of earnest Red Cross members who have sincere convictions against the use of animals for discovery of remedies for sickness. We recognize that it should be an obligation of the Red Cross management to show deference to such honest conviction.

Realizing the situation, an individual has come forward and has offered to supply money necessary for this work so that none shall be taken from the general funds of the Red Cross. The fund provided will also be used to reimburse the Red Cross General Fund for any expenditures in connection therewith in the past. The War Council decided to accept this offer without in any way taking a position either for or against the question in controversy, but because they do not wish their acts to be considered to be in conflict with the sincere convictions of Red Cross members.

The New York *Times* says in an editorial article:

It will be with regret deeply tinged with indignation that all sane and reasonably enlightened people will hear of the decision by the heads of the Red Cross not to use for animal experimentation—often and almost always incorrectly called "vivisection"—the money hitherto appropriated by them for that purpose. The decision may mean avoiding the loss of a few contributions to the Red Cross funds, but it also means the triumph of vicious ignorance over common sense, and it will encourage to further efforts the members of the most detestable and not the least dangerous group of men and women to be found in the United States.

The campaign of the anti-vivisectionists is waged, now as always, with no other weapons than those of calumny and falsehood. They deliberately and persistently make the most abominable accusations against men who have done and are doing an enormous amount of successful work to mitigate human suffering and to save human life. Incidentally, these same workers are conferring like advantages on innumerable domestic animals, but let that pass. The immediate issue is that interference with animal experimentation just now decreases the safety of the men

in our army and navy, makes impossible, so far as the interference is effective, the conquest of several terrible diseases to which the fighters for liberty are still exposed, and sets up the absurd claims of fanatic degenerates against the well-demonstrated truths of medical science.

And the Red Cross cautiously says that it does not take sides for or against "vivisection"! Such caution is reprehensible—is utterly unworthy of that great and beneficent organization. It should take sides, standing for right and against wrong. The immediate profit of doing anything else or less will be dearly bought in future loss of both money and respect. Red Cross money, in the amount that was proposed, could not possibly have been better invested than in the establishment of a biological laboratory near the scene of war for the study of the maladies of soldiers which this sort of research has not yet conquered. It was weak, and worse than weak, for the Red Cross to heed the hysterical shrieks and the monstrous charges of venality and murder that came from a few people whom it strains charity to call deluded or insane.—*Science*.

OBITUARY

GABRIEL F. FOSTER, M.D.

Dr. Gabriel F. Foster, Memphis, Mo., an honorary member of the Scotland County Medical Society, died April 18, 1918, from apoplexy, aged 80 years. Dr. Foster was a faithful and active member of this society up to a few years ago when his health failed to such an extent as to keep him in doors and prevented him from attending the meetings of his county medical society. He limited his practice to diseases of the eye, ear, nose and throat.

JOHN M. BERRY, M.D.

Dr. John M. Berry died at his residence in Brentwood, near Webster Groves, Mo., in the sixty-second year of his age, on Feb. 25, 1918. Dr. Berry was born in St. Louis County on a farm of which his late residence was originally a part, on Oct. 1, 1856, and spent his whole life in this vicinity. He was educated at Washington University, St. Louis, and received his degree in medicine from the St. Louis Medical College on March 8, 1878. He was a member of the St. Louis County Medical Society and of the Missouri State Medical Association.

E. J. THURMAN, M.D.

Dr. E. J. Thurman was born on Feb. 29, 1840, in Moniteau County, Missouri, and died at his residence, 2805 S. Kingshighway, St. Louis, on March 31, 1918, in the seventy-ninth year of his age. When the Civil War broke out he was an undergraduate practicing under his preceptor, Dr. Thurston, at Versailles, Mo. He joined Price's army and served through the war as an assistant surgeon. After the war he located at Fenton and practiced for several

years, after which he attended the St. Louis Medical College, and after receiving his degree he practiced in Kirkwood a short time, going from there to Texas, then to Kansas City, Mo., and finally located in Fenton, Mo., in 1874, where he practiced until 1907, when he removed to his late residence, where he remained until his death. Although past 78 years of age, the doctor remained in the harness, attending to his practice and interested in everything pertaining to medicine to the time of his death. He was a member of the St. Louis Medical Society, and of the Missouri State Medical Association.

JOHN W. CLARK, M.D.

DR. JOHN W. CLARK of Fristoe, Mo., one of our original members, died Saturday, April 20, 1918, aged 56. He was formerly located at Cross Timbers where he practiced medicine for a number of years and when he moved to Fristoe about four years ago he tried to retire from practice and conducted a general store there. He was a fleshy man and was troubled with asthmatic attacks in heavy, damp weather so that it was hard for him to do general practice; but he was such a good physician that the people would not let him alone. After he got a car it was easier for him to get around so that for the past two years he was kept very busy. Saturday noon he had eaten his dinner as usual and seemed to be in the best of health when he suddenly put his hand over his heart, gave a little cry of pain, and fell dead. Dr. Clark was one of the charter members of the Benton County Medical Society, and has always been in good standing. He will be greatly missed in this county, as a physician and a business man, and was much needed in that section on account of its distance from other physicians.

HENRY NORMANTON CHAPMAN, M.D.

Dr. Chapman was born in Halifax, England, Sept. 24, 1866, and died suddenly at his home, 4491 West Pine Boulevard, April 25, 1918, of a localized arterial sclerosis. Soon after his graduation from the Missouri Medical College, in 1893, he became associated with Dr. E. W. Saunders, of this city, and had charge of the Bethesda Maternity Hospital, then located at 1210 Grattan St., and, while always engaged in general practice, his obstetrical work, in which he was very successful, predominated.

He was at one time a member of the Board of Health, and for many years a Pension Examiner. For many years, too, he was a vestryman at St. Phillip's Episcopal Church, from which he was buried.

Dr. Chapman was a man of pleasing personality, of an even, hopeful disposition; in fact, although a careful, conscientious, able,

physician, it was his spirit, with absolutely no tincture of the "commercial," that endeared him to the people and many of the profession.

Whatever a man's creed, or belief, he must, and does, admire a consistent Christian. Such was Dr. Chapman. Fearlessly, openly, and yet never audaciously, he let men know whose side he was on, and why; and there were few, if any, laymen, better able to expound the Christian tenets.

His contributions to medicine were confined to practical papers, and a recitation of experiences, and cases, especially in the earlier days, before the Bethesda Pediatric Society.

In losing him, the wife has lost a true husband, the children have lost a good father, the aged parents a dutiful son; this Society has lost a most creditable member; the writer lost a real friend.

And there are many homes, and more hearts, Jew and Gentile, that sorrow today, and will for years to come, over the untimely death of Dr. Henry Normanton Chapman. — *Bulletin, St. Louis Medical Society.*

NEWS NOTES

DR. C. E. GRIFFITH of Gallatin has been appointed local surgeon for the Rock Island Railroad, to succeed the late Dr. W. L. Brosius.

DR. E. H. BULLOCK, formerly superintendent of State Hospital No. 2, at St. Joseph, has been appointed Director of Health of Kansas City.

WE have recently learned that the wife of Dr. H. S. Reynolds of Maplewood, president of the St. Louis County Medical Society, died suddenly on April 3 from congestion of the lungs.

THE St. Louis Society for the Relief and Control of Tuberculosis is making a special survey and intensive study of health conditions in the district surrounding the new tuberculosis clinics.

DR. GEORGE H. JONES of Jefferson City, Mo., Secretary of the Missouri State Board of Health, delivered an address before the Missouri Funeral Directors Association at their annual meeting in St. Louis, May 14.

DURING April the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Merek and Company: Cresol-Merck; Guaiacol Carbonate-Merck; Quinine Dihydrochloride-Merck; Quinine and Urea Hypochloride-Merck; Thymol Iodide-Merck.

DR. E. P. NORTH, of St. Louis, has been appointed a member of the Missouri State Board of Health to succeed Capt. M. R. Hughes, who resigned and is now in active service in the Medical Reserve Corps of the Army.

WASHINGTON UNIVERSITY has decided to open the medical and dental departments to women as well as men. By this action all of the departments of the University become co-educational. The names of the medical school and the dental school were ordered changed and will hereafter be known as the School of Medicine and the School of Dentistry.

It is reported that Capt. J. F. Hardesty of St. Louis, a member of St. Louis Medical Society, and Lieut. L. M. Edens of Cabool, a member of the Texas County Medical Society, have been captured by the Germans and are now in the prison camp at Karlsruhe, Germany. Lieut. H. A. Goodrich of Webster Groves is also reported a captive at Camp Karlsruhe.

INSTRUMENT STOLEN.—A cystoscope of the Brown-Burger type was stolen from the office of Dr. J. B. Williams, Joplin, Mo., about May 1. If such an instrument is offered for sale to any member under suspicious circumstances, Dr. Williams would be very grateful for any information that might lead to the recovery of his property. He offers a reward of \$25 for the return of the cystoscope.

THE Entertainment Committee of the Chicago Medical Society invites the physicians of the Army and Navy and the various examining boards as their guests during the meeting of the A. M. A. Headquarters will be "Parlor A" La Salle Hotel. It will afford the Chicago Medical Society much pleasure to have the physicians engaged in the service visit Chicago during this meeting; the society will spare no means to make this visit pleasant.

THE State Committee on the Prevention of Blindness of the Missouri Commission for the Blind met in the offices of the Commission in St. Louis on April 15, 1918. A lay member, Mrs. Anna F. Harris, was made chairman of the committee for the ensuing year. Drs. Arthur E. Ewing, Edward H. Higbee and John Green were appointed to cooperate with the Children's Code Commission for legislation for the proper treatment of eyes of new-born infants. Dr. Alexander Johnson of Grandin, Mo., county chairman for Carter-Shannon County and Dr. Guy Tittsworth of Sedalia, county chairman of Pettis County, were re-appointed in their respective counties. The meeting was very well attended by oculists from St. Louis and other parts of Missouri.

THE following physicians who accepted commissions in the Medical Officers Reserve Corps have resigned: Capt. B. K. Stumberg, St. Charles, and Lieut. Clarence O. C. Max, St. Louis.

The following have been honorably discharged on account of physical disability existing prior to entering the service: Lieut. Claude J. Allen, Rich Hill; *Capt. Levi M. Asbury, Dalton; Lieut. Clyde M. Balsley, Joplin; Lieut. Clarence Cardwell, Stella; Major Wm. J. Frick, Kansas City; *Lieut. Arthur L. Fuerth, Cape Girardeau; *Lieut. W. B. McClure, Hale; *Lieut. Frederick A. Hecker, Kansas City; Lieut. Edw. E. Heiple, St. Louis; *Lieut. Chas. E. Maness, Neosho; Lieut. Montague M. Meyers, St. Louis; *Lieut. L. C. Wilhite, St. Louis; *Lieut. Hiram S. Winters, Oran.

*Nonmembers.

DURING May the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Geo. W. Brady & Co.: Barium Sulphate-Brady for Roentgen-Ray Work.

Johnson and Johnson: Chlorine-Soda Ampoules.

Lederle Antitoxin Laboratories: Antipneumococcic Serum, Type I.

Monsanto Chemical Works: Chlorcosane-Monsanto.

Morgenstern & Company: Acid. Phenylcinch.-Morgenstern: Acid. Phenylcinch.-Morgenstern Tablets: Sodium Phenylcinch. Water-Morgenstern.

Parke, Davis & Company: Antipneumococcic Serum, Type I.

Rector Chemical Company, Inc.: Procaine-Rector.

E. R. Squibb and Sons: Antipneumococcic Serum, Type I.

THE life of the medical officer while in training is described in a most interesting manner by the physicians at the Medical Officers' Training Camp at Fort Riley, in a book entitled "The Year Book." This book contains pictures of all the organizations which have been in camp since its start, and editorial matter describing each organization as well as much interesting matter regarding camp life. For all physicians expecting to receive orders to go into training this book will serve as an introduction to army life and prepare them for the "ins and outs" of the training camp. But this publication has an added purpose, one that is worthy of support without other inducements, and that is to raise funds to finance a band for the Medical Department of the Medical Officers' Training Camp. The government does not furnish this much desired equipment for medical officers, so the funds must be raised by contributions. The

book holds much interest not only for those who are going into the service, but for their families and friends. It should have a large sale. The price is \$2.50 per copy and may be obtained by addressing The Year Book, M. O. T. C., Fort Riley, Kan.

BASE HOSPITAL UNIT No. 28, made up principally of Kansas City physicians in charge of Dr. J. T. Binnie, has been located at Fort McPherson, Georgia, for some time but only recently have we been able to obtain a list of the members of the unit. We are glad to publish the list of physicians who are attached to this unit as follows: Major J. F. Binnie, Kansas City; Major L. S. Milne, Kansas City; Capt. H. S. Valentine, Kansas City; Capt. J. P. Henderson, Kansas City; Capt. J. L. Farmer, Russellville, Ky.; Capt. E. H. Skinner, Kansas City; Capt. G. W. Robinson, Kansas City; Capt. G. H. Hoxie, Kansas City; Lieut. K. L. Able, no address; Lieut. A. N. Altringer, Kansas City; Lieut. M. H. Clark, Kansas City; Lieut. C. C. Dennie, Kansas City; Lieut. C. E. Earnest, Kansas City; Lieut. J. R. Elliott, Kansas City; Lieut. S. B. Hibbard, Kansas City; Lieut. R. L. Hodge, Kansas City; Lieut. C. J. Hunt, Kansas City; Lieut. L. W. Kelso, Paxton, Ill.; Lieut. J. W. Kimberlin, Kansas City; Lieut. P. M. Krall, Kansas City; Lieut. D. S. Lee, Paris, Ill.; Lieut. K. D. Lynch, El Paso, Tex.; Lieut. Henry S. O'Donnell, Ellsworth, Kan.; Lieut. R. S. Sullivan, Chattanooga, Tenn.; Lieut. F. R. Teachenor, Kansas City; Lieut. H. A. McKnight, Philadelphia, Pa.; Lieut. T. H. Tye, Cameron, Mo.; Lieut. F. M. Wilhite, Excelsior Springs, Mo.; Lieut. K. E. McCamey, Paterson, N. J.; Second Lieut. H. S. Dunmire, New Alexandria, Pa.; Lieut. D. R. Black, Kansas City.

THE semi-annual meeting of the Southwest Missouri Medical Society was held at Springfield, May 23-24, with a good attendance. This was the 108th session and Dr. E. C. Roseberry of Springfield, President of the Society, reviewed its activities during that time. He pointed out the many advances that had been made in the diagnosis and treatment of disease and laid special emphasis on informing the people in all phases of preventive medicine in order that they may cooperate with the medical profession. In this way, too, he said, the public would learn the difference between a physician well equipped with knowledge to prevent and cure disease and the medical pretender who played upon the ignorance and prejudice of the people. He paid a high tribute to the character and professional skill of the late Dr. J. E. Tefft of Springfield, who was the first president of the Society.

Resolutions indorsing the propoganda of the government to prevent and control venereal diseases were passed, and the city council of Springfield was petitioned to pass an ordinance pending in that body providing for the control of venereal diseases in Springfield.

Major W. H. Luedde of St. Louis urged the physicians to enlist in the Medical Reserve Corps of the Army, and in the evening showed motion pictures, depicting some phases of the life and work of the Army Medical Officer at the front.

Dr. J. W. Love of Springfield spoke of the need for passing the Owen-Dyer bill, giving officers of the Medical Reserve Corps adequate rank so that their orders concerning the sanitary regulations would have effect. The following officers were elected: President, Dr. H. L. Kerr of Crane; First Vice President, Dr. S. W. Chandler of Cassville; Second Vice President, Dr. L. Henson of Galena; Treasurer, Dr. Lee Cox of Springfield; Recording Secretary, Dr. H. S. Hill of Springfield; Corresponding Secretary, Dr. Joseph W. Love of Springfield.

The fall meeting will be held at Hollister, and will combine the pleasures of an outing with the regular work of the Society.

MEMBERSHIP CHANGES, MAY

NEW MEMBERS

Gray Chandler Briggs, St. Louis.
 Leo Barken, St. Louis.
 John Brown, Maysville.
 W. F. Carroll, St. Joseph.
 Frank Cohen, Kansas City.
 Carl T. Eber, St. Louis.
 Geo. W. Elders, Ware.
 Wm. L. Martin, Chilhowee.
 V. Eugenia Metzger, Kansas City.
 Oliver P. M. Mills, Grant City.
 J. R. Pyrtle, Centerville.
 Jordan E. Ruhl, St. Joseph.
 Chris M. Sampson, St. Joseph.
 Leith H. Slocumb, St. Louis.
 Joseph Scott Snider, Kansas City.
 Harry T. Upshaw, St. Louis.
 Wm. Conrad Wessell, Hermann.
 H. J. Wise, Sparta.
 James M. Black, St. Louis.
 Arthur H. Deppe, St. Louis.
 Alonzo L. Fitzporter, St. Louis.
 Richard Kring, St. Louis.
 Edwin P. Meiners, St. Louis.

CHANGES OF ADDRESS

Frank G. Beard, Brookfield to Maitland.
 J. W. Burgess, Greenwood to Leeton.
 W. F. Byler, 3028 Wabash St., to 3225 Troost Ave., Kansas City.
 O. W. Clabaugh, 1110 West 7th St., to 413 S. Park St., Sedalia.

J. D. Ferguson, Greenfield to Ava.
 T. A. Finley, Leesville to Rockville.
 George W. Harmon, Purdin to Tyrone.
 E. E. Higdon, Allenville, Mo., to Olney Springs, Colo.
 Samuel L. Inman, Valley Park, Mo., to Kempton, W. Va.
 Halsey M. Lyle, Waukee, Ia., to Eldorado, Kan.
 Chas. H. McHaffie, Springfield to Ash Grove.
 Thomas F. Miller, Kansas City to Lamar.
 Frank G. Nifong, Boone Bldg. to 10a S. 9th St., Columbia.
 J. B. Norman, Tipton, Mo., to Riley, Kan.
 I. M. Owens, Leslie to Gerald.
 A. C. Pettijohn, Brookfield, Mo., to Vinita, Okla.
 Frank R. Spell, Freistatt to Liberal.
 Thomas Britt Todd, Pilot Grove to Adrian.
 F. L. Trippier, Limon, Colo., to College Mound, Mo.
 A. L. Woolis, Darlington, Mo., to Galesburg, Ill.
 James A. Wren, Sturgeon to Lockwood.

REINSTATED

G. P. Alton, Gashland.
 W. F. Logan, Sedalia.
 Elton S. Smith, Stockton.
 Lerton V. Dawson, Odessa.

DECEASED

W. L. Brosius, Gallatin.
 H. N. Chapman, St. Louis.
 J. W. Clark, Fristoe.
 Gabriel F. Foster, Memphis.
 F. V. Frazier, Altamont.
 R. C. Haggard, Raymondville.
 Charles R. Long, London, Eng.
 Jacob A. Schneider, Concordia.
 W. S. Wheeler, Kansas City.

DROPPED

H. E. Grant, Keota.
 Lewis C. Snell, Kansas City, Kan.

CORRESPONDENCE

THE HUN OFFENSIVE

IN THE FIELD, FRANCE,
 April 10, 1918.

Dear Dr. Goodwin:

No doubt you think me very dilatory in answering your letter, but as a matter of fact, I had written to you before this; the letter, however, was lost along with other items during our recent move. The heinousness of writing for publication has been so impressed upon us that I shall not have the pleasure of accept-

ing your invitation to contribute a letter to THE JOURNAL under the existing circumstances, but shall merely thank you for changing the address so that THE JOURNAL now comes to me over here.

Captain Crossen, Lieutenant Murdock, and I are now billeted together. The 12th Engineers greatly regretted having Major Bowen taken from them, but feel very fortunate in having Captain Crossen to fill his post as regimental surgeon. Of course, to me it is a pleasure to be associated with him, though it was a long range association up to a few days ago, as I was on detached service.

When the Hun offensive started, of course, we had to leave our comfortable camps after being shelled for some thirty-six hours. Our men acquitted themselves well, running their trains through shell fire, repairing shot-out track all day and night until we were ordered out. By that time infantry was occupying trenches established behind our camps and machine gun fire seemed very close. In fact, we never have gotten very far ahead of the enemy though at present things are at a standstill.

After getting our railroad stock to its ultimate destination the various detachments merged and we began a series of rather long and hurried marches. You can readily imagine that the medical department then had its hands full with the lame and the halt which resulted from this unaccustomed form of locomotion for railroad men. However, the men were game and have done surprisingly well—were unable to get time or water to wash faces for three days, to say nothing of sleep. Of course, there were various other discomforts, such as having the road along which we were bivouacked, bombed and machine gunned by enemy planes. I think all of us feel that this is only the prelude after all, so are looking forward to more hard work before things come to a focus. We only wish that we could share our discomforts, few as they have been, with some of the petty obstructionists we left behind us, but who still seem to be at liberty.

It has been a source of edification and pleasure to be working with our British allies. Think both of us have learned things. An outstanding feature of all this retirement has been the methodical orderliness of it. With every facility for observation of such, we have seen no panic either in masses or individuals. While the enemy has occupied much barren country, we cannot but feel that "he laughs best, who laughs last." May our own country hasten its contribution toward the victorious termination of this conflict.

Very sincerely yours,

THEODORE P. BROOKES,
 First Lieut., Medical Reserve Corps.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.
 Carter-Shannon County Medical Society, Jan. 9, 1918.
 Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.
 St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.
 Henry County Medical Society, Jan. 24, 1918.
 Moniteau County Medical Society, Jan. 28, 1918.
 Camden County Medical Society, Feb. 1, 1918.
 Scott County Medical Society, Feb. 2, 1918.
 Cedar Country Medical Society, Feb. 8, 1918.
 Clark County Medical Society, Feb. 8, 1918.
 Cooper County Medical Society, Feb. 13, 1918.
 Atchison County Medical Society, Feb. 18, 1918.
 Ralls County Medical Society, March 10, 1918.
 Pulaski County Medical Society, March 11, 1918.
 Pemiscot County Medical Society, March 25, 1918.
 Cape Girardeau County Medical Society, March 28, 1918.
 Vernon County Medical Society, March 28, 1918.
 Putnam County Medical Society, April 11, 1918.
 Cass County Medical Society, April 13, 1918.
 Laclede County Medical Society, April 15, 1918.
 Clay County Medical Society, May 2, 1918.
 Newton County Medical Society, May 2, 1918.
 Jefferson County Medical Society, May 8, 1918.
 Pettis County Medical Society, May 11, 1918.

ST. LOUIS MEDICAL SOCIETY

Meeting of April 6, 1918

The meeting was called to order at 8:45 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and after correction were approved.

Dr. Talbot reported for the subcommittee on subscriptions for the Missouri Building at Camp Funston that up to date \$118 had been collected and he also asked permission to pass the subscription list among the members present.

The scientific program consisted of the following: "Civic Crisis in St. Louis Produced by the War," by Mr. C. M. Hubbard, Superintendent and General Manager of the St. Louis Provident Association. Mr. Hubbard reported that he would like the St. Louis Medical Society to assist the Provident Association in the movement for health survey of St. Louis and to furnish a list of volunteer physicians for the four different branches of the Provident Association.

"Refitting of Wounded Soldiers for Industry, Lantern Slide Demonstration of French and Canadian Soldiers," by Dr. G. Canby Robinson.

"The Speech Problem," by Dr. Louis K. Guggenheim.

"Speech Defect in St. Louis Schools," by Dr. J. W. Wallin, in charge of Psycho-Educational Clinic, St. Louis Public Schools.

"The Speech Problem from the Teacher's Standpoint," by Mrs. Sara Small Temple. Discussion by Mr. Stratton, Secretary of the Committee on American Speech.

The secretary read a communication from the Navy Department, asking the St. Louis Medical Society to stand the expenses for a page of advertising in the daily paper. Dr. Robinson moved that this be referred to the Council. Seconded. Carried.

Dr. Koetter moved that a vote of thanks be extended to the essayists and that a letter of thanks be sent to each. Seconded. Carried.

Attendance 140.

Meeting of the Council, April 10, 1918

The meeting was called to order at 8:50 p. m., by the chairman, Dr. Elsworth S. Smith.

Minutes of the previous meeting were read, corrected and approved.

Communication from the Navy Recruiting Station asking the Society to share the cost of two pages of advertising in the newspapers was read by the secretary.

Dr. Funkhouser moved the secretary write to Commander Willson inquiring what the cost would be. Seconded by Dr. Baldwin. Carried.

Dr. Hamel amended this motion by adding that the Bulletin of the St. Louis Medical Society would offer any necessary space that the Navy Department would like. Seconded and carried.

Dr. Rehfeldt moved that a detailed report of the income and expenditures from the beginning of the Bureau up to date be given at the next meeting of the Council. Seconded by Dr. Gayler. Carried.

Dr. Smith appointed Dr. R. Brent Murphy, treasurer of the St. Louis Medical Society.

The following were recommended for active membership: Harry T. Upshaw, 707 Metropolitan Building; Leith H. Slocumb, Humboldt Building; Leo Barken, 1700 North Union Avenue; Gray C. Briggs, Wall Building; Carl T. Eber, Mullanphy Hospital.

These applicants were unanimously elected to active membership.

Dr. Hamel moved that the application, by transfer, of Dr. H. Clay Allen be included. Seconded by Dr. Rehfeldt, and Dr. Allen was elected to active membership.

Dr. Charles F. Briegleb of St. Clair was elected corresponding member.

The application of Dr. Robert C. McElvain for active membership was rejected.

Dr. Funkhouser moved that the question of taking over the Dental Library be resubmitted to the Library Committee for further instructions. Seconded by Dr. Hamel. Carried.

In the Bartscher Fund Committee report Dr. Shapleigh stated that \$175.62, due to the Bartscher Fund Committee, had been deposited to the credit of the St. Louis Medical Society at the Grand Avenue Bank.

Dr. Rehfeldt moved that the amount, \$175.62, to the credit of the St. Louis Medical Society, be transferred to the Bartscher Fund Committee. Seconded by Dr. Hamel. Carried.

On motion the Bartscher Fund Committee was requested to invest the balance on hand (\$1,800) in Third Liberty Loan Bonds.

Dr. Funkhouser moved that the principal of the Bist note, \$3,000, be invested in Third Liberty Loan Bonds. Seconded and carried.

Dr. Hamel moved that the Bartscher Fund Committee convert the Second Liberty Loan Bond of

\$1,000 into the Third Liberty Loan Bond. Seconded and carried.

Dr. Boisliniere moved that the Council express the sympathy of the St. Louis Medical Society to the father of Dr. Silvio von Ruck who died in New York City, April 7, 1918. Carried.

A letter from Mrs. Philip Moore in regard to training of nurses for tuberculosis patients was read.

Dr. Gaylor moved the recommendation of the committee be accepted as the training is not compulsory. Seconded and carried.

A letter from the Chamber of Commerce about the bridge arbitrary was read. Dr. Boisliniere moved that the Council indorse their action in abolishing the bridge arbitrary and that the secretary be instructed to write them. Seconded and carried.

The recommendation of the Program Committee for the Public Planning meeting to be held June 15 before the St. Louis Medical Society was accepted.

The secretary reported for the House Committee and stated that the Service Flag was being displayed from the front of the building and that 32 more stars were to be added.

Dr. Smith inquired about a reporter for the general meetings. As there has always been trouble in getting a reporter since Miss Scott-Hill left, Dr. Boisliniere moved that the president at his discretion employ a reporter whenever he thought it necessary. Seconded and carried.

The secretary read a communication from the War Saving Committee of Missouri asking for a Thrift Stamp Bureau at the St. Louis Medical Society.

Dr. Boisliniere moved that the Society invest \$100 in Thrift Stamps for re-sale. Seconded and carried.

Councilors present: Drs. Baldwin, Boisliniere, Funkhouser, Gayler, Hamel, Kuhlmann, North, Rehfeldt, Tupper, Smith and Gundlach.

Councilors absent: Drs. Bliss, Kane and Schuleter. Visitors present: Drs. Koetter, Bassett, Homan, Rehfeldt, E. Lee Myers, Yost, and J. G. Moore of Mexico, Mo.

Meeting of April 13, 1918

The meeting was called to order at 8:45 p. m., by the vice president, Dr. Phelps G. Hurford. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

"Remarks on the Treatment of Undescended Testicles," by Dr. John R. Caulk. Discussion by Drs. E. W. Saunders, Henry Jacobson; Dr. Caulk closing.

"Demonstration of a New Lantern for Testing Color Blindness," by Dr. J. Ellis Jennings. Discussion by Drs. W. E. Shahan, Major Luedde; Dr. Jennings closing.

"Enrolment in the Medical Reserve Corps or the Volunteer Medical Service Corps," by Major W. H. Luedde.

Dr. Boisliniere moved that the organized profession, as represented by this Society, heartily approve and endorse the measures referred to by Dr. Luedde in his address, as follows:

First, in view of the published approval of the President of the United States of the Owen-Dyer bill that the Chamber of Commerce of the city of St. Louis be requested to give its endorsement to that measure.

Second, That the secretary write to the congressional delegation that this Society has endorsed the Owen-Dyer bill and the bill which provides for commutation of quarters and fuel for officers in the field and that they be urged to use every effort to secure the passage of this bill.

Third, That this Society also endorses the Dyer bill which provides for the admission of officers of the Medical Reserve Corps in service at the close of war into the regular medical corps of the United States Army. Carried.

Dr. Jacobson moved that our president appoint a committee to wait upon the Chamber of Commerce and request them to take immediate action on the Owen-Dyer bill, or at least state their attitude toward it. Carried.

Dr. Koetter offered resolutions on the alleged disloyalty of Dr. Charles H. Weinsberg. Carried unanimously. The resolution follows:

WHEREAS, The Missouri State Medical Association concurred in by the St. Louis Medical Society, has agreed that any member who in any way gives aid and comfort to the enemy is disqualified from membership, and

WHEREAS, An evening paper contains statements purported to have been made by Dr. Charles H. Weinsberg, a member of this Society, therefore be it

Resolved, That a committee be appointed by the chairman to hear the version of Dr. Weinsberg, and to report to the Society at its next meeting.

Attendance 200.

ARTHUR GUNDLACH, Secretary.

WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fiftieth Meeting—April 8, 1918

1. EXHIBITION OF CASES.

A. CASE OF PNEUMOCOCCUS INFECTION.

—By DR. O. R. SEVIN.

B. CASE OF MEDIASTINAL TUMOR.—By

DR. C. E. GILLILAND.

William W., aged 43 years, negro, waiter, married. The patient came into the hospital complaining of dyspnea and pain in chest. Family history: Two bothers and two sisters died of pneumonia. Past history: Variola at 17 years. Gonorrhoea twice; penile ulcer at 16 years; no secondaries. Present illness: October, 1917, first noticed swelling of the face and pain in the chest, right side; pain increased on deep breathing. Soon had dyspnea; shortly after was confined to bed with pain all over chest, and fever; fever and malaise soon disappeared. Condition continued same until December, when he began to have attacks of choking. At present patient has night sweats; palpitation occasionally. Patient has been unable to work past four months.

Physical examination: Coughs frequently; very little expectoration; dyspnea slight; face and neck swollen; teeth bad; tonsils large; jugulars distended. Chest expansion much greater on left; tender to pressure, upper right anterior, where there is diffuse pulsation and is the seat of the pain. Right percussion note impaired front and back except in upper axillary region and small area front and back continuous where there is tympany. Breath sounds tubular, upper portion; much decreased, lower. Tactile fremitus diminished below. Posterior percussion note impaired to scapular line; breath sounds tubular. Heart: Apex beat in sixth and seventh intercostal spaces 15 cm. to left. Cardiac dulness to the right not made out; left 15.5 cm. Systolic murmur at apex. Pulse equal both sides. Abdomen negative. Left varicocele.

Roentgen ray: Dense mass middle right thoracic cavity continuous with mediastinum; shadow uniformly hazy, right lower; heart displaced to left. Fluoroscopic: Large mass made out but shadow not clear and no pulsation could be satisfactorily determined. Examination not very satisfactory.

Blood pressure equal, both arms 115-90. Thoracentosis 275 c.c.; 2,400 cells to 1 c.m. practically all red blood cells. Specific gravity around 1.014.

Wassermann, + + + +, all antigens. Urine, negative. Blood counts negative. Temperature slightly above normal much of time.

The question arises whether this is a benign or malignant tumor of some nature other than aneurysm.

DISCUSSION

DR. ROBINSON: The point in the physical findings that I feel is important is the pulsation. I am inclined to think it is an aneurysm. The fact that the patient has fairly definite pulsation is, in my mind, very good evidence in favor of it. The engorged veins are brought out particularly well when the patient coughs.

C. A CASE OF SPLENECTOMY.—By DR. R. P. DORRIS.

2. THE BLOOD VOLUME CHANGES IN SHOCK AND METHODS BY WHICH THEY MAY BE MODIFIED.—By DR. H. S. GASSER.

Data were presented from observations on the blood changes in experimental shock.* Four methods of producing shock were employed: (1) injections of massive doses of adrenalin; (2) exposure and manipulation of the intestines; (3) clamping the aorta above the celiac axis so that the distal pressure was 30 mm. mercury, and (4) occluding the vena cava above the liver so that the general arterial pressure was 40.

The absolute volume of the blood was determined by a method devised by the author and Dr. Meek depending on the determination of the dilution of a known amount of acacia injected intravenously. Observations on the plasma changes were made in the same animals by counting the number of red blood corpuscles.

Concentration of the blood as shown by the blood count was found to be a uniform finding in all cases amounting on the average to 22 per cent. of the total blood volume, which means that about 30 per cent. of the plasma was lost. In some cases over half of the total plasma was lost. When the losses produced by concentration were compared with the total losses it was found that in about one-third of the cases the decrease in plasma volume accounted for the total depletion of the blood volume; in the other cases the total loss was found to be more than the red cell count would indicate. The explanation of this was found in the pathologic picture. All four forms of shock showed injection of the intestinal mucosa, and in about 60 per cent. of the cases there had been passage of blood through the mucosa into the lumen. Hemorrhages into the spleen pulp were also a constant finding. The microscopic picture of the intestine demonstrated that the capillaries were greatly distended and filled with red blood corpuscles.

In cases where acacia was injected before the production of shock was initiated, quite different volume findings were obtained. The concentration of blood characteristic of shock was present only to a much less degree, a concentration averaging 7 per cent. as compared with 22 per cent. in the control cases. In many cases although the concentration was slight the total volume was found to be decreased. This is accounted for presumably by the hemorrhage into the tissues and stasis in the capillaries.

The blood volume in shock was found to be higher than one would expect from the small amount of blood which may be drawn from an animal in shock. Experimental observations show that the blood is not in the arteries, arterioles or veins. By exculsion it must therefore be in the capillaries, for which view the pathologic picture stands as direct evidence.

The decrease in blood volume, the great increase in

viscosity resulting from the greater number of red cells per unit of blood volume and the dilation of the capillaries, all aid in decreasing the volume flow through the tissues. This brings about faulty metabolism, and decreased oxidation as is indicated by the resulting acidosis. With this tissue damage would come increased permeability of the capillary walls leading to further loss of blood volume so that the different phenomena are all parts of the same vicious cycle.

As far as the blood is concerned the therapeutic problem is to restore its volume and if possible prevent further filtration. In the experimental procedures there are three possible mechanisms for the loss of plasma: (1) increase of capillary pressure, (2) increase of the osmotic pressure of the tissue lymph by-products of faulty metabolism, and (3) increased permeability of the vessel wall. It so happens that no matter whether the plasma is lost by any one or all of these ways the process could be favorably influenced by increasing the colloidal osmotic pressure of the plasma. In the experiments in which shock was produced after the injection of acacia the colloidal osmotic pressure was calculated to be increased about 11 per cent.

The restoration of the volume might be brought about by a fluid having the colloidal osmotic pressure of the blood as Bayliss' solution, or by injecting a hypertonic colloid, then a hypertonic crystalloid on the theory that the crystalloid by osmosis would restore the fluid from the tissues and that the fluid once in the blood would be held by the osmotic pressure of the colloid. The feasibility of this plan was shown by comparable experiments on the same dog at different times. The maximum expansion of the blood volume from a hypertonic solution of glucose (18 per cent.) is at the end of the injection, the fluid being rapidly returned to the tissues. Tissue fluid is attracted only slowly by 25 per cent. acacia and never to an amount sufficient to dilute it to the colloidal osmotic pressure of the blood plasma, however, if the acacia solution is followed by the sugar solution the theoretical expansion is obtained and is maintained in a satisfactory manner.

When this procedure was applied to experimental shock it was found that the blood volume could easily be restored to normal. In many cases NaHCO_3 was used as the hypertonic crystalloid and sodium acacia as the hypertonic colloid. In these cases not only the blood volume but its CO_2 capacity was restored.

DISCUSSION

DR. BROOKS: An increased temperature is an increase in the blood flow. Are not there other conditions, pathologic conditions in which you get those phenomena, and still you would not get inflammation? The analogy is not quite sufficient to warrant it.

DR. ERLANGER: If I may be permitted to reply to Dr. Brooks, let me first make it clear that Dr. Gasser's statement was that the vascular changes of shock resemble those of inflammation; he did not say that shock is inflammation. With this clearly in mind, then, let me say that the calor of inflammation is not primarily a vascular change. It is the result of vascular change. If the seat of an inflammatory process is on the surface of the body the increase in the velocity of blood flow associated with one of the stages of inflammation raises the temperature of that part through the more rapid transportation of heat from deeper and warmer parts of the body. A vascular change involving the surface of the body, if sufficiently extensive, might actually cause the body temperature to fall through the increased heat loss by convection.

DR. SACHS: There is, to my mind, another point that ought to be considered. There are many of us here who will, within the next year or so, have opportuni-

* The majority of the experiments were carried out in cooperation with Dr. Joseph Erlanger.

ties to see a great many surgical cases in shock. I think it would be unfortunate if they were to carry away the idea from this meeting that shock and inflammation are the same thing, since the evidence presented here is as yet not strong enough to justify such a conclusion.

3. THE HEART IN DIPHTHERIA.—By G. CANBY ROBINSON.

The heart is seriously affected in from 10 to 20 per cent. of all cases of diphtheria, and cardiac lesions are frequently the cause of death in this disease. The diphtheria toxin may cause circulatory disturbances by its action on the myocardium, on the extrinsic cardiac nerves and on the vasomotor mechanism. The symptoms and physical signs vary according to the structures that are damaged and the clinical features serve to indicate the location of the lesion.

The myocardium in cases dying of diphtheria usually shows widespread and extensive parenchymatous changes, fatty degeneration being the most common lesion described. Myocardial degeneration results in tachycardia, weak heart sounds and various forms of arrhythmia. It is the usual cause of sudden death, which may occur during convalescence from diphtheria.

Interest in this subject has been aroused by the study of a recent case of diphtheria in the St. Louis Children's Hospital which showed both clinical and electrocardiographic evidence of severe myocardial damage. The case was in the service of Dr. Jeans, who has kindly placed the clinical record at my disposal.

The patient, a girl of 12 years, was admitted to the contagious ward on March 25, 1918, with the diagnosis of diphtheria, which had its onset on March 15. The diagnosis was made on the 17th of the month, when 5,000 units of antitoxin were administered. She was apparently well by March 19, but on the following day she did not void urine and complained of pain around the heart. A day or so later the physician in attendance noticed that the heart rate had become very slow, and advised that the patient be sent to the hospital.

On admission the patient was semi-stuporous and appeared anemic. The tonsils were slightly enlarged and reddened and a few small areas of exudate were seen on them. On the posterior pharynx there was a greenish exudate, and slight glandular enlargement in the neck was noted. The heart rate was 40 per minute. The beats were regular. No abnormal pulsations or thrills were noted. The cardiac dullness extended 2 cm. beyond the left nipple line; the heart sounds were clear, and the radial pulse was of fair quality. There was slight edema of the ankles. Otherwise the physical examination revealed no abnormalities of importance.

There were 5,000,000 red cells and 20,000 leukocytes. The urine showed a heavy trace of albumin and a few hyaline and granular casts. During her illness the temperature never rose above 100.5 and the pulse remained slow—at about 40 per minute; 5,000 additional units of diphtheria antitoxin were administered. The clinical examination indicated the presence of uremia, the final examination showing 161 mg. of urea per 100 c.c. of blood, the total nonprotein nitrogen rising to 236 mg. The patient died on March 28, three days after admission.

The first electrocardiogram, obtained on March 26, revealed the presence of complete auriculoventricular dissociation, the auricles beating at a rate of 78, while the ventricles were beating independently at a rate of 35 beats per minute. The ventricular complexes were of a distinctly abnormal form and from their form and the strikingly increased duration of the Q R S group of waves, were considered to indicate a disturbance of conduction of the cardiac impulse through

the ventricles. The form was that which arises when there is a block in the branch of the conducting system leading in to the left ventricle.

The electrocardiograms obtained on the following day showed variations in form of the ventricular complexes, which indicated that the intraventricular conduction was so disturbed that the impulse passed now first to the right ventricle and now first to the left ventricle.

The electrocardiograms from this case indicate that there was a widespread disturbance of conduction, involving not only the path of conduction between the auricles and ventricles, but the conduction paths through the ventricles as well. This derangement of the cardiac mechanism is one which has been recorded in several cases of diphtheria which have been reported in the literature, and demonstrates the widespread damage to the heart which may be caused by diphtheria toxin.

DISCUSSION

DR. ERLANGER: Dr. Robinson did not make entirely clear to me his views on the cause of the ventricular disturbance. I understood him to say that there is complete auriculoventricular block, and that the impulse descends from the auricles, encountering a block at one time in one branch of the bundle and at a later time in the other. If the condition is one of complete auriculoventricular block, then auricular impulse, of course, never reaches the ventricles. Furthermore, such a shift in the location of bundle-branch block that Dr. Robinson predicates seems to me to be extremely improbable. To my mind a more likely explanation of the picture is given by assuming that the condition is due to ectopic impulse formation, the location of the origin of impulse shifting from time to time.

DR. ROBINSON, closing: I think Dr. Erlanger has made a proper criticism. In interpreting this curve we took for granted something that I did not state; that is, we considered that the impulse that was stimulating the ventricles was arising in the auriculoventricular tissue. The reason we have taken this for granted is because usually in complete heart block the impulse stimulating the ventricles arises in this part of the heart and the normal form of the electrocardiogram is maintained. In the curve presented the form of the electrocardiogram is characteristic of definite bundle-branch block, and is different from the curve yielded by impulses arising in abnormal points in the ventricles, giving rise to the so-called ectopic beats. It is possible, however, that what we actually have is first an impulse arising in the left and then in the right ventricle. This interpretation seems, however, to be less likely correct than that given.

4. EXPERIMENTAL AND CLINICAL OBSERVATIONS ON ANESTHESIA.—By S. F. ABRAMS.

For the past five weeks we have been using an anesthetic machine, the general principles of which were first described by Dr. Jackson* in 1915. Since the original description of this machine was published, numerous and extensive improvements have been made in it, until at present it is entirely satisfactory for clinical work. The essential principle on which this machine is constructed is that the anesthetic (nitrous oxid, ether, ethyl chlorid, "somnoform," etc.) is constantly rebreathed over and over, while the carbon dioxide exhaled by the patient is continuously removed from the respired gases or vapors by means of chemical absorption by an alkaline hydroxid, preferably sodium hydrate. By the use of this method a great saving of the anesthetic (e. g., nitrous oxid) can be effected, as the following results will show.

* Jackson, D. E.: Jour. of Lab. and Clin. Med., 1915, 1, No. 1, p. 1.

With one 100-gallon tank of nitrous oxid we carried out ten anesthetics, ranging in duration from thirty minutes up to two hours and twenty minutes, and the total length of time during which anesthesia was maintained was ten hours and fifty minutes. With other machines this amount of gas would at the maximum not last more than three hours, and very generally would scarcely last one hour.

At the present time a new mask is being designed,² and certain other improvements are being worked out which will undoubtedly lead to a further saving of gas and oxygen.

The absence of carbon dioxid from the gases breathed by the patient appears to be of great advantage, as anesthesia is induced without struggling or cyanosis, and after the return of consciousness the patients seldom suffer from nausea or other after-effects.

DISCUSSION

DR. JACKSON: I need not make any extensive remarks on this subject, for I am sure you all know the general principles on which this method of anesthesia is based.

It should be entirely possible to absorb practically all the carbon dioxid given off by the patient for this is merely a matter of the amount of sodium hydrate placed in the machine.

It requires about five minutes as a rule to produce complete anesthesia, because the patient is not suffocated as would occur if he were given a sufficiently high concentration of nitrous oxid to produce complete insensibility in forty or fifty seconds. In those cases in which a mixture consisting of 95 to 98 per cent. of nitrous oxid is given, the patient is simply quickly deoxygenated and the loss of consciousness produced corresponds more nearly to syncope or suffocation than it does to true anesthesia. For even the venous blood contains some 16 per cent. of oxygen, but this content can by no means be maintained when the patient breathes an atmosphere containing only 2 to 5 per cent. of oxygen.

Dr. Abrams has mentioned certain objections which are involved in the construction of the face piece which we are using. This face piece is the same as that used on a well-known make of gas machine, and for its shortcomings we claim no discredit. There is no good form of face piece now made. The reasons for this are obvious when we consider that the human face constitutes one of the chief playgrounds for the freaks of Nature. We have the round face, the oval face, the square face, etc. Obviously the problem possesses inherent difficulties of a peculiarly individualistic and highly differentiated character. However, I have already overcome one of these by making this valve which effectually closes off the breathing bag when the mask is removed from the face. Thus the gas which the bag contained is saved and can be used again as soon as the face piece is replaced.

The prevention of asphyxia by this method should be easier and more complete than by any other previously used method; and the relaxation should be as complete as it is possible for the nitrous oxid to produce. I suspect this will prove to be very much greater than has previously been assumed from the results obtained with the usual type of machine. In my opinion the rebreathing of carbon dioxid is objectionable, and I should prefer to remove it completely from the nitrous oxid and oxygen which the patient breathes. Ether, ethyl chlorid, "somnoform," etc., can be given in an ideal manner with this machine, and any combination (including nitrous oxid) can easily be administered.

I am under great obligations to the department of obstetrics of Washington University Medical School, and to Dr. Abrams and the Drs. Swartz in particular,

2. This mask has since been finished and is entirely satisfactory as shown by careful clinical tests.

for carrying out with the apparatus the clinical work which has been reported this evening.

The very great value which a machine of this type may possess now in the Army is obvious to all. More than three months ago Crile was anxious to get fifteen machines immediately for use in France. But it was necessary to do a great deal of experimenting before a perfect type of machine could be produced. Most of this experimental work has now been completed, and the clinical observations reported this evening furnish the evidence that the experimental work has been entirely successful. A further special use to which the machine may be put is in the administration of pure oxygen to gassed soldiers. The very great advantage which a method of this kind possesses over the usual procedures is so evident that no comment is needed.

DR. DOCK: We can see from the table a very marked economy for the hospital, but speaking from the standpoint of one who has to advise people to be anesthetized and who is asked about the discomfort, it does not seem a square deal. Half an hour to them seems like 500 hours. It seems to me that if the patient could go under faster and still economize, it would add to the advantage of the apparatus.

KANSAS CITY MEDICAL AND SURGICAL CLUB

March 12, 1918

Obstetric Clinic, Kansas City General Hospital.—
By Dr. George C. Mosher, Senior Attending Obstetrician and Dr. Buford G. Hamilton, Junior Attending Obstetrician.

Dr. Mosher: It gives us a great deal of pleasure to see so many of you interested in the work which everyone of you who is engaged in general practice must himself encounter in his own experience. Surgery of a major type is of value to you, mainly from the point of diagnosis and you send the patient to an expert operator in whom you have confidence. Obstetrics you will yourself manage in a great majority of instances. I see a number of my old students here and to them the clinic must be of peculiar advantage as a contrast to methods which we taught and practiced several years ago. It is hoped that these ward walks and clinical demonstrations may attract, each month, those of you who care to follow out the demonstration of modern obstetric practice. You are always welcome.

The greatest interest which is being manifested in the domain of obstetrics and gynecology today is on the question of diagnosis and those points which pertain to lessening shock and minimizing dangers of sepsis. We shall have in the series of cases shown today an opportunity to see how these are manifested.

The first patient, Mrs. C., is a primipara, aged 32. Her blood pressure ranges from 140 to 160 mm. Her urine shows albumin and casts. She has some headache but no other symptoms. She has been in ineffectual labor for thirty-six hours with R. O. P. cervix somewhat softened but no engagement. We find by the tape that her McDonald measurement is 37 and by the pelvimeter that the Ahlfeld is 26. These being interpreted should indicate a fetus of 52 cm., and weighing about 7 pounds 4 ounces. Now, you will understand the calculation of the length of the fetus by external measurements is not exactly a mathematical one, but it is weird and sometimes astonishing how near we come to the total length of the fetus by the estimate, which is, of course, always verified post partum by measuring and weighing the baby. The reason for delay in this case, which has pelvic measurements 29, 25 and 19.5 cm. is that the head has not rotated and therefore there is no adjustment possible of the head and the pelvic canal. We do not avail ourselves of the other pelvic mea-

surements if these three are reasonably harmonious, but if either is abnormally short the internal or true conjugate and the intertrochanteric, by Whitridge Williams pelvimeter, are also taken.

Having concluded that the patient is at term and the labor being ineffectual, the cervix having been found by rectal examination to be undilated and the presenting part free above the inlet, we are to decide as to whether we advise an immediate cesarean section, agreeing with our friend Rudolph Holmes that obstetrics is a lost art, or else we set about to assist nature in her attempt to bring the labor to a close by means more in harmony with the plan of voluntary emptying the uterus, by trying to supply the elements to the problem which nature has apparently failed to bring into play. That is dilatation, better flexion and more forceful efforts on the part of the pains which are stimulated by the Voorhees bag according to the plan worked out by Charles B. Reed of Wesley Hospital, Chicago, and reported by him in *Surgery, Gynecology and Obstetrics*, a series of 1,000 cases.

Please note that stress is to be put on, first, accurate diagnosis; second, failure of powers of nature, and third, supplying the artificial help in a manner least likely to cause shock, interference with mechanism, loss of liquor amnii or infection. All these we believe we find in the Voorhees bag properly placed and carefully watched. Barnes fiddle bag we have not found as efficacious, although some of our confrères still employ this veteran agent. You will observe we use slight anesthesia in the introduction of the bag. This is our own variation, as Dr. Reed introduces the bag without an anesthetic. We have found that the average patient is very apt to be apprehensive of any operative interference with labor and in her shrinking from being hurt she becomes panicky, delaying the process and working herself into an emotional stew which is not conducive to the best efforts to help herself because she has become exhausted. Dr. Pendleton, who has usually given the anesthetic for me, has acquired a facility of keeping the patient at just about the proper degree of analgesia, not a definite anesthesia, and she usually rouses as soon as we are through with the placing and filling the bag. Dr. Buford Hamilton has in the meantime folded the bag into a roll occupying the least possible space and firmly grasped it by Péan forceps, having first satisfied himself the bag is perfect, that is, that no leaks exist. We use a metal piston syringe for filling, although Reed prefers an ordinary Davidson syringe. Our dilatation is done with a set of the old reliable Hegar dilators graduated up to 20. The latter admits the large size bag. The dilators are introduced rapidly to avoid unnecessary delay and as soon as No. 20 passes readily, the bag is introduced. It will be observed that we use long retractors instead of bivalve speculum. This is perhaps a matter of being more familiar with the retractors. Also the dorsal position is used rather than the lateral for the same reason. The cervix is held down firmly by two volsella, one in either lip of the cervix. This is also a refinement over some operators' technic and really is an aid in the accurate placing of the dilators and the bag with the least delay.

The bag being placed is held by long uterine dressing forceps within the uterus, while the water is slowly forced into the cone of the rubber bulb. We secure the rubber pipe of the bag by folding it on itself and slipping on two of Pettit's funis clamps; a bit of adhesive adhering to the lower abdomen keeps the bag in position while it is doing its work. The patient is returned to bed and in a variable period of from twenty minutes to six hours, labor is on. It is usually somewhat shorter than a similar labor in which no artificial stimulus is employed.

Let us repeat, we have never yet ruptured the membrane nor has any patient developed an infection after labor is inaugurated.

You will observe that McDonald and Ahlfeld have been several times mentioned, and in order to make it clear it may be well to explain just what is meant by these names used in an obstetric sense.

Several years ago Ahlfeld said it was not a matter of pride to be able to boast of having delivered a patient of a 10-pound baby, but a disgrace that the average mother should be unnecessarily mutilated and subjected to shock because of the terrific stress of a long labor, and the baby so often born asphyxiated or suffering from brain lesion due to difficult forceps operation.

He devised a method of measuring the child in utero, placing one end of the pelvimeter at the upper border of the symphysis and the other at the fundal pole of the uterus. He then read the index, subtracted 2 cm. for thickness of the skin and multiplied by 2 which he declared gave the length of the fetus from vertex to sole, and was able to prove it post partum. McDonald reached the same end by using a tape measure over the parabola described by the contour of the maternal abdomen and taking 35 cm. as indicating a fetus of 50 cm. total length, maintaining that such a measurement meant a fetus at full term. Ahlfeld took the diameter between the points of the pelvimeter and if it measured 27, he subtracted 2 for the skin and doubled the 25, which also gave 50 as the length. Now we are not always willing to induce labor on account of the measurements alone, but in case of indication of interference we agree with Dr. Charles B. Reed that in the cases where labor has been induced for cause, our postpartum results have agreed with the antepartum calculations with at most 2 cm. variation.

A paper which is now under preparation gives the remarkable results we have had during the past year in the treatment of twenty-one cases of eclampsia and preeclamptic toxemia by a systematic plan of procedure in which the mortality has been less than in any other reports we have seen. Twenty-one cases have been under observation and all on a generalized plan. Elimination, removal of foci of infection, combating acidosis, and in every instance where these prophylactic measures failed to reduce blood pressure, failed to clear up classical barometric readings foretelling the storm which was approaching, the uterus has been emptied and usually by the Voorhees bag method.

These cases in which convulsions have succeeded each other in rapid sequence with long, hard undilated cervix which menaced the patient if she were allowed to go on in labor, cesarean section was done. Each of these patients recovered. Of the entire number, all recovered but one, who had been delivered before entering the hospital and who died from a general septic infection three weeks after all convulsions had ceased.

I mention these facts to show you the promise held out by a system of treatment which is standardized. I hope to be able to show you the results of this induction this afternoon.

This second patient, Mrs. L., a primipara, aged 22, had her last menstrual period May, 1917. Her pregnancy has been uneventful and laboratory findings negative. Her measurements show crests 28 cm., spines 24 cm., and Baudelocque 20, blood pressure 124 systolic and 70 diastolic; McDonald 36 and Ahlfeld 27.5, which indicates that she is probably at term and the baby 50.5 cm. in length. She will have tonight castor oil and quinin and then be allowed to await developments for forty-eight hours if nothing transpires.

The third is a breech case, Mrs. S., the wife of a soldier. She entered the hospital expecting to be confined within a week. Her McDonald is 34, so as the presenting part is not engaged we estimate she will probably go over two weeks, being kept under daily observation.

The next case, Mrs. O., a primipara, has been in

labor four hours. She is normal, aged 26, left occipito-anterior position, and is having twilight sleep given under direction of our intern, Dr. H. H. Olsen. The remarkable thing about scopolamin in labor is the relief from shock which the woman experiences when under this seminarcois. While scopolamin analgesia has been greatly criticized in this country and was originally condemned in England, a glance at recent British obstetric literature will convince one that the profession is becoming more and more appreciative of its benefits. Articles have recently appeared in the *British Medical Journal*, the *Medical Press and Circular*, and other journals giving results of cases in series commendatory in tone concerning results.

We use scopolamin when indicated, especially in high strung, nervous patients, and in those in whom a long, tedious labor is anticipated. This patient has had her second dose, the first having been narcophin 5.5 grain, and scopolamin $\frac{1}{200}$ grain, the second following in three quarters of an hour scopolamin alone $\frac{1}{200}$ grain. We have had no blue babies, no hemorrhage or other maternal grief. The only precaution necessary in these cases is that they must be watched throughout, as often the baby is born suddenly and unobserved otherwise, the mother being only semi-analgesic under her analgesia.

At 4 p. m. we have the satisfaction of showing delivery of the patient on whose case induction with the bag was done at 11 a. m. The voluntary delivery is without incident. Your attention is called to the method of keeping the head flexed to avoid laceration and at the suggestion of Tweedy of the Rotunda Hospital, Dublin, a hemostat is clamped on the cord at the vulva to indicate by its dropping two inches outside that the placenta is out of the uterus and in the vagina. No effort is made to dislodge the placenta. A policy of watchful waiting is always best to follow at this stage.

The treatment of pernicious vomiting of pregnancy has been heretofore one of the most discouraging features of obstetrics.

We have to day under our care Mrs. L., who is the fifth patient seen in the last year who has responded to the hypodermic injection of extract of corpus luteum, as suggested by Dr. John C. Hirst of the University of Pennsylvania, who has conducted a series of experiments on this type of toxemia. The patient is put to bed. Nervous excitement is controlled by sodium bromid, 1 dram, and chloral, 20 grains by enema after a cleansing flushing with sodium bicarbonate. Later she is given 30 grains of bromid according to the occasion.

The corpus luteum is given on alternate days $\frac{1}{3}$ c.c. and increased to $\frac{1}{2}$ and to 1 c.c. The addition of thyroid extract seems to have a beneficial effect when the pulse is running wild, but must be given cautiously as in our experience it sometimes has an untoward effect.

Two of the patients on whom we have used this method are multiparae and had previously suffered therapeutic abortion in two instances each, from such intolerable vomiting that their lives were menaced by the toxemia.

Three of these patients have been delivered in good condition and two remain on the list for June. We shall be glad to have any of you who meet with pernicious vomiting to try the corpus luteum and report so that a larger number of cases being available, a fuller trial may demonstrate the value which we are to place on this therapy.

The final branch of our service is the tragic one "Northwest Three," in which you see our series of abortions. In these beds are the women who in fancied desperation plot the destruction of their unborn children. Some of these abortions are inevitable, of course, but the great majority are deliberately induced. We have now in the ward five cases of incomplete infected abortion; at times there are in this ward ten and fifteen admissions a week.

The results of treatment here constitute our especial pride, as we have, against much opposition, demonstrated the value of a conservative or "hands off" policy in treating septic abortions as against active interferences.

Several years ago, to be accurate, in 1914, we began to see that the universal curettement which was fashionable at that time resulted in a vast morbidity and considerable mortality, and coming across the writings of Winter, who in 1911, showed a death rate ranging from 11 to 33 per cent., in various clinic centers in Europe, we became convinced that a conservative method might give better results. Since that time no abortion has been curetted in our service and we will just glance at the record and call attention to the old regimen in contrast.

In the curettement series 1909 to 1910, one hundred cases taken in series showed twenty-two and a half days in the hospital; 72 per cent. of complications, cellulitis, abscesses, etc.; mortality 8 per cent. From 1914 until the present these cases are treated by being placed in the modified Fowler position, given an ice bag over the abdomen, a brisk dose of magnesium sulphate, and when pain is excessive a hypodermic of morphin of $\frac{1}{8}$ grain. We have now treated 358 cases by this expectant plan and our results are as follows: Days in hospital, eight and one-third; complications, 5 per cent.; mortality, none. There have been two deaths, which were of women who had been curetted outside before admission.

When we view this merely from the standpoint of the taxpayer, leaving out the welfare of the patient, it is a startling picture, reducing the expense of each patient two-thirds and, of course, the patient incidentally profits by the conservation. Friends and relatives of patients have stormed, and outside physicians have often criticized the negative plan of treatment. Interns look askance when the temperature moves to 105 F. and a foul smelling discharge persists, but they are reassured and, after observing a few cases, are won over to our technic.

If we may summarize the service of a day's development in the department, we should like to call to your attention the following essential points:

First, all examinations of prospective maternity patients are by external palpation, auscultation and pelymetry. No vaginal examination is permitted in the division.

Second, the McDonald and Ahlfeld measurements determine when the case is at term. Of course these are taken in connection with the calendar history of the patient. On this depends the question of the maturity of the fetus.

Third, all toxemic patients are endangered by the burden they carry and when prophylaxis fails to relieve them the ideal mode of induction of labor is by the Voorhees bag rather than by digital or accouchement forcé dilatation.

Fourth, patients are tranquillized by scopolamin and suffer less from shock in twilight sleep. We have seen no blue babies or ill effects from the use of scopolamin, but the benefits of its exhibition are apparent to any intelligent, unprejudiced observer.

Fifth, infection and its attendant grief to the patient is practically ruled out of the General Hospital in "West Three" wards by technic, isolation of patients coming in with elevated temperature, avoidance of vaginal examination.

Sixth, the waiting policy of the third stage, no attempt to deliver the placenta until the hemostat indicates it is in the vagina, is the safe and sane method of procedure.

Seventh, daily examination and recording the height of fundus determines when the lying-in woman is convalescent. She goes home when the fundus is not apparent to touch above the symphysis and the lochia has been for forty-eight hours free from red or brown color.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the Assembly Room of the Library Building, Wednesday evening, April 17, 1918, with forty-one members present. The president, Dr. Daniel Morton was in the chair.

This being a scientific session, no business was transacted. The program of the evening consisted of a paper on "Diabetes," by Dr. Clarence Good, discussed by Drs. Eliscu, Lau, Potter, Kessler, and discussion closed by Dr. Good.

This was followed by a demonstration of pathologic tissues from surgical cases by Dr. Caryl Potter, as follows: (a) Myositis ossificans; (b) mesenteric cyst; (c) loose joint bodies; (d) exophthalmic goiter.

Dr. Conrad, chairman of the Program Committee, announced that the moving picture machine had been ordered and membership in the Clinical Film Company had been closed and the outfit expected to be ready for use at the next meeting.

At the suggestion of Dr. Caryl Potter, the undergraduate and graduate nurses were to be invited whenever subjects that would interest them would be shown on the film machine.

There being no further business before the Society, the meeting adjourned.

Meeting of May 1

The regular meeting of the Buchanan County Medical Society was held in the Assembly Rooms of the Public Library, Wednesday evening, May 1, 1918. There were sixty-two members present. The minutes of the previous meeting were read and approved.

The application of Dr. Chris. M. Sampson having received its second reading, the doctor was duly elected to membership.

The application of Dr. J. E. Ruhl having received its second reading, was duly acted upon and the doctor elected to membership.

The application for membership of Dr. William H. Bailey of Savannah was deferred for further investigation.

On motion of Dr. Spencer, seconded by Dr. Farber, the following resolution was passed:

Resolved, That this Society unanimously request the President and House of Delegates of the Missouri State Medical Association to appoint Dr. C. R. Woodson to act as Councilor during the absence of Dr. O. C. Gebhardt.

The remainder of the evening was taken up with an exhibition of films on the moving picture machine.

W. F. GOETZE, M.D., Secretary.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met at Kingston, May 16, 1918, at 2 p. m.

The purpose of this meeting was to stimulate enlistment in the Medical Officers' Reserve Corps. After a discussion of about two hours, a motion was carried that every member of the society of military age offer his service to his country by enlisting in the Medical Officers' Reserve Corps within thirty days. We think this is a step in the right direction. We hope to read of other counties doing the same. We feel that Caldwell County physicians are loyal and patriotic. Some of us will give up large practices and make great sacrifices, but such sacrifices will be small in comparison to the greater good we may do by serving our country. Our country now has four physicians in the Medical Reserve Corps and two more have already been examined. Can any small county in Missouri beat this?

GEORGE S. DOWELL, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

Cape Girardeau County Medical Society held its regular monthly meeting at Cape Girardeau, May 13, with the following members present: Drs. Hays, Hope, Howard, Porterfield, Jr., Sebaugh, Schulz Wichterich, Wilson and Yount.

Dr. Yount gave an interesting talk on cataract, and other members reported interesting cases from practice. Our delegate to the State Association meeting made his report and on motion this Society decided to pay the state dues of members called to the colors.

E. H. G. WILSON, Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session in the office of Drs. Potter and Potter at Lancaster, April 18, 1918, with the following members present: Drs. W. H. Zieber of Queen City, J. H. Keller, B. B. Potter, William A. Potter of Lancaster, A. J. Drake, H. E. Gerwig and J. B. Bridges of Downing.

A communication from the chairman of the committee on public health, requesting information as to the physicians and their classification in Schuyler County, was read and the secretary was asked to reply to same.

A paper entitled, "The Microscope as an Aid to Diagnosis," was read by Dr. A. J. Drake. It was an interesting paper and was discussed by a number of the members.

The other members on the program were absent or unprepared.

Dr. William A. Potter, who has volunteered in the Medical Reserve Corps, reports that he has received and accepted his commission as captain and is ready to go when called, the Society extends to him its highest appreciation for his patriotism and good wishes for his early and safe return.

There being no further business the Society adjourned to meet in Downing, Thursday, June 18, 1918.

Papers will be read by Drs. E. L. Cox, W. H. Zieber, and J. H. Keller.

J. B. BRIDGES, M.D., Secretary.

THE TRUTH ABOUT MEDICINES**NEW AND NONOFFICIAL REMEDIES**

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

DICHLORAMINE-T (MONSANTO).—A brand of dichloramine-T complying with the standards of New and Nonofficial Remedies. For a description of the actions, uses, dosage and chemical and physical properties see New and Nonofficial Remedies, 1918, p. 157. Monsanto Chemical Works, St. Louis (*Jour. A. M. A.*, April 6, 1918, p. 999).

NORMAL HORSE SERUM.—Marketed in syringes each containing 10 Cc.; also in ampules containing from 10 to 100 Cc. as ordered. Gilliland Laboratories, Ambler, Pa.

GILLILAND'S CONCENTRATED AND REFINED DIPHTHERIA ANTITOXIN.—Marketed in syringes containing each 1,000, 3,000, 5,000, 7,500, 10,000, 15,000 and 20,000 units. Gilliland Laboratories, Ambler, Pa.

GILLILAND'S CONCENTRATED AND REFINED TETANUS ANTITOXIN.—Marketed in syringes containing each 1,500, 3,000 and 5,000 units. Gilliland Laboratories, Ambler, Pa. (*Jour. A. M. A.*, April 20, 1918, p. 1159).

TYPHOID VACCINE.—Marketed in packages containing three syringes, the first containing 500 million killed typhoid bacilli and the second and third containing each 1,000 million killed typhoid bacilli; in packages containing three ampules, the first containing 500 million killed typhoid bacilli, and the second and third containing each 1,000 million killed typhoid bacilli; also in ampules containing from 5 to 100 Cc. of the vaccine as ordered. Gilliland Laboratories, Ambler, Pa.

SMALLPOX VACCINE.—Marketed in sealed capillary tubes, in packages containing one, five and ten tubes each. Gilliland Laboratories, Ambler, Pa.

ORIGINAL TUBERCULIN, "O. T."—Marketed in 1 Cc. vials. Gilliland Laboratories, Ambler, Pa.

TUBERCULIN OINTMENT IN CAPSULES (for the Moro Percutaneous Diagnostic Test).—An ointment consisting of tuberculin "Old" and anhydrous wool fat, equal parts. Marketed in capsules sufficient for one test. Gilliland Laboratories, Ambler, Pa.

BOUILLON FILTRATE TUBERCULIN, "B. F."—Marketed in 1 Cc. and 3 Cc. vials. Gilliland Laboratories, Ambler, Pa.

BACILLEN EMULSION TUBERCULIN, "B. E."—Marketed in 1 Cc. and 3 Cc. vials. Gilliland Laboratories, Ambler, Pa.

TUBERCULIN RESIDUE, "T. R."—Marketed in 1 Cc. and 3 Cc. vials. Gilliland Laboratories, Ambler, Pa.

TUBERCULIN FOR THE DETRE DIFFERENTIAL DIAGNOSTIC TEST.—Consisting of one tube each of Original Tuberculin "O. T.," Bouillon Filtrate Tuberculin "B. F.," human, and Bouillon Filtrate Tuberculin "B. F.," bovine. Gilliland Laboratories, Ambler, Pa.

CRESOL-MERCK.—A brand of cresol, U. S. P. Merck and Co., New York.

GUAIACOL CARBONATE-MERCK.—A brand of guaiacol carbonate, U. S. P. Merck and Co., New York.

QUININE DIHYDROCHLORIDE-MERCK.—A brand of quinine dihydrochloride, U. S. P. Merck and Co., New York.

QUININE AND UREA HYDROCHLORIDE-MERCK.—A brand of quinine and urea hydrochloride, U. S. P. Merck and Co., New York.

THYMOL IODIDE-MERCK.—A brand of thymol iodide, U. S. P. Merck and Co., New York (*Jour. A. M. A.*, April 27, 1918, p. 1225).

PROPAGANDA FOR REFORM

SOME NOSTRUMS.—Continuing its policy of giving the public the facts in regard to worthless, injurious or misleadingly advertised nostrums, the Louisiana State Board of Health has analyzed the following "patent medicines": Dermillo, a skin and complexion nostrum composed of zinc oxid, calcium carbonate, starch and salicylic acid in water, colored and perfumed.—Wendell's Ambition Pills, a "great nerve tonic," containing strychnin, ferric oxid, pepper, cinnamon and ginger, and probably a little aloes.—Orchard White, a toilet preparation to be mixed with lemon juice, reported to be a mucilage containing bismuth citrate, boric acid, alcohol and gum tragacanth.—Exelento Quinine Pomade, a hair preparation found to consist chiefly of petrolatum, some liquid petrolatum, a trace of oil of gaultheria, sulphur, and among other things, a trace of quinin.—Sloan's Liniment, which appeared to be composed essentially of oil of turpentine, oil of camphor, oil of sassafras and capsicum.—Vick's Vap-O-Rub, which appeared

to be a mixture of petrolatum with camphor, menthol and oil of thyme, eucalyptus and turpentine.—La Creole Hair Dressing, a perfumed solution containing lead acetate, sulphur and glycerin, alcohol and water.—Prescription A 2851 for Rheumatism, formerly said to have been known as Eimer and Amend's Rheumatic Remedy, which appeared to be a sherry wine containing 7.5 per cent. potassium iodid (*Jour. A. M. A.*, April 6, 1918, p. 1024).

GUAIODINE.—Examination of Guaiodine, a preparation of the Intravenous Products Co., Denver, in the A. M. A. Chemical Laboratory shows that, instead of containing free "colloidal" iodine as claimed, the preparation is essentially an iodated fatty oil, containing only combined iodine. The referee of the Committee on Pharmacology reported to the Council on Pharmacy and Chemistry that equally misleading, in view of the Laboratory's findings, are the implied claims that the antiseptic action of Guaiodine corresponds to that of free iodine. Guaiodine is advertised chiefly for the treatment of gonorrhoea by means of obviously false claims. The Council declared Guaiodine inadmissible to New and Nonofficial Remedies because of false statements as to composition and action (*Jour. A. M. A.*, April 6, 1918, p. 1026).

NEOARSPHENAMINE.—The Federal Trade Commission has granted an importing license to the Diarsenol Company, Inc., 475 Ellicott Square, Buffalo, for neoarsphenol, the Canadian brand of neoarsphenamine. Licenses to manufacture neoarsphenamine have also been issued to the Takamine Laboratories, New York, to the Farbwerke-Hoechst Co., New York, and to the Dermatological Research Laboratories, Philadelphia. The safest and most effective products, provided one has mastered the technique, are the arsphenamines—not the neoarsphenamines (*Jour. A. M. A.*, April 6, 1918, p. 1027).

AMERICAN-MADE ACETYSALICYLIC ACID.—At the request of the Council on Pharmacy and Chemistry an examination of the market supply of American-made acetylsalicylic acid has been made in the A. M. A. Chemical Laboratory by P. N. Leech. The investigation shows that there are on the American market, made by American firms, several brands of acetylsalicylic acid that are just as good as, if not better than, the widely advertised Aspirin-Bayer. About a year ago the Council on Pharmacy and Chemistry deleted Aspirin-Bayer from New and Nonofficial Remedies. Since the Bayer aspirin patent expired in February, 1917, thereby making it possible for manufacturers legally to produce and sell acetylsalicylic acid in the United States, the Council established standards for the quality of this unofficial drug. As a result, the following products have been found to meet these requirements and are included in New and Nonofficial Remedies: Aspirin-L. and F., Acetylsalicylic Acid-Squibb, Acetylsalicylic Acid-Merck, Acetylsalicylic Acid-Milliken, Acetylsalicylic Acid-M. C. W., Acetylsalicylic Acid-Monsanto and Acetylsalicylic Acid-P. W. R. (*Jour. A. M. A.*, April 13, 1918, p. 1097).

UNDULY TOXIC ARSPHENAMIN.—In view of the reports in current medical literature of untoward results from the use of arsphenamin and neoarsphenamin, Dr. G. W. McCoy, Director of the U. S. Hygienic Laboratory, Washington, D. C., requests that samples of any lot of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination (*Jour. A. M. A.*, April 13, 1918, p. 1110).

HALL'S CATARRH CURE.—Another victim fails to get the hundred dollars offered in cases in which this preparation failed to effect a cure. The promoters informed its victim that before paying the guarantee, he would have to prove that his case was one of simple catarrh not complicated by any other disease and that he had taken sufficient of the cure (*Jour. A. M. A.*, April 13, 1918, p. 1113).

ANTIPNEUMOCOCCUS VACCINE.—The work by Lister in the diamond mines of Kimberley, South Africa, gives promise of a successful method of inoculation against lobar pneumonia. Lister finds that the pneumonia prevalent among the workers in the diamond mines is due mainly to three groups of pneumococci, and that inoculation with a vaccine made from the three groups prevents the occurrence of pneumonia as caused by members of these groups (*Jour. A. M. A.*, April 20, 1918, p. 1163).

MISBRANDED NOSTRUMS.—The following are some "patent medicines" which the federal authorities held to be sold under false claims: Ascatco, containing 13 per cent. alcohol and some opium.—Mexican Oil, containing over 57 per cent. alcohol, together with essential oils, glycerin, red pepper, emodin, menthol and a small amount of opium alkaloids.—Persil, containing 40 per cent. alcohol. Though claimed to contain, in addition, asparagus, parsley, celery, buchu, and juniper berries, it contained no appreciable quantities of celery, buchu, juniper, asparagus or parsley.—Dr. Kennedy's Favorite Remedy, containing 18 per cent. alcohol, nearly 50 per cent. sugar, and over 4 per cent. potassium acetate, with methyl salicylate, aloes, licorice and oil of sassafras.—Our Standard Remedy, tablets containing rhubarb, senna, scoparius, licorice, red pepper and some ammonia compound with indications of aloes.—Dr. King's Throat and Lung Balsam, claimed to relieve coughs and colds and consumptive patients in the last stages of the disease.—"White Pine Expectorant" and "White Pine Balsam" (Allan-Pfeiffer Chemical Co.), a syrup containing alkaloid (probably morphin), chloroform, alcohol, benzoic acid and plant extract, but no extract or tar of white pine.—California Tuna Tonic Tablets, pills containing iron carbonate and a small quantity of nux vomica alkaloids (strychnin, etc.).—Alorine Antiseptic Suppository, containing quinin sulphate, boric acid and tannic acid.—St. Joseph's Quick Relief, containing 32 per cent. alcohol with Peru balsam, camphor and red pepper.—"Andrews' Wine of Life Root or Female Regulator," containing over 14 per cent. alcohol, sugar, methyl salicylate and tannin. "Andrews' Wine of Life Root Annex Powders," composed of sodium chloride and sodium bicarbonate, with a small amount of sodium carbonate.—Clark Stanley's Snake Oil Liniment, a light mineral oil mixed with about 1 per cent. of fatty oil, red pepper and possibly a trace of camphor and turpentine (*Jour. A. M. A.*, April 20, 1918, p. 1183).

NEUROSINE AND THE ORIGINAL PACKAGE EVIL.—Neurosine advertisements ask that only original bottles of Neurosine be dispensed when physicians prescribe the nostrum. The reason is obvious: the bottle has the name blown in the glass and thus is an invitation to the patient to purchase more on his own initiative and also to recommend the preparation to his friends. The danger to the public from the self-administration of mixtures of bromides, such as Neurosine, is obvious. Neurosine is said to contain potassium bromid, sodium bromid, ammonium bromid, zinc bromid, extract of lupulin, fluidextract cascara sagrada, extract of henbane, extract of belladonna, extract of *canabis indica*, oil of bitter almond and aromatic elixir. This chemical blunderbuss has been advertised for use in insomnia, hysteria, neurasthenia, migraine, etc. It has also been recommended for children suffering from chorea. In all the years that Neurosine has been exploited to physicians with such remarkable claims, we have never seen a report of a careful clinical study in which the product has been used under the conditions which scientific investigation demands (*Jour. A. M. A.*, April 27, 1918, p. 1251).

THE TOXICITY OF ARSPHENAMIN (SALVARSAN).—James C. Sargent, Milwaukee, Wis., and J. D. Willis.

Roanoke, Va., report untoward effects from the intravenous administration of American-made salvarsan (arsphenamin). Such experiences are not unusual, but should be reported. Untoward results followed the use of the German salvarsan. Such reactions may be due to faulty preparation, to deterioration of certain ampules of a batch, to idiosyncrasy of the patient or to faulty technic or preparation or injection. There is no reason to believe that the arsphenamin made in this country is more toxic or less satisfactory than that formerly imported from abroad (*Jour. A. M. A.*, April 27, 1918, p. 1254).

CAMPETRODIN AND CAMPETRODIN NO. 2

Report of the Council on Pharmacy and Chemistry

The following report on Campetrodin and Campetrodin No. 2 has been adopted by the Council and its publication authorized.

W. A. PUCKNER, Secretary.

The following report of the A. M. A. Chemical Laboratory on "Campetrodin" and "Campetrodin No. 2," sold by the A. H. Robins Company, Richmond, Va., was submitted to the Council by a referee of the Committee on Pharmacology:

Campetrodin and Campetrodin No. 2, Double Strength, are called "ethical medicinal specialties" by the A. H. Robins Company, Richmond, Va., which sells them. An advertisement in the *Maryland Medical Journal* (December, 1917) contains the following claim for composition:

"CAMPETRODIN (Made in Two Strengths of Iodine). This preparation is an Oleaginous Solution of Iodine in Camphor."

A booklet describing the "specialties" of the Robins Company contains the following in reference to Campetrodin: "Composition: Camphor, Iodine Element, Oleaginous Solvent." From this it appears that the preparations are claimed to contain elementary (free) iodine in an "oleaginous solvent." Since free iodine, as is well known, readily combines with fats, it was decided to determine the form in which the iodine was present in these preparations. The examination demonstrated that both preparations contained but a trace of free iodine. On steam distillation there was obtained from both preparations a distillate amounting to about 35 per cent. by volume which had an odor strongly suggestive of turpentine, while the residue contained the iodine and had the characteristics of an iodized fatty oil.

Quantitative determinations indicated that Campetrodin contained approximately 0.03 per cent. of free iodine and 1.3 per cent. of iodine in combination with the fatty oil. Campetrodin No. 2, Double Strength, contained approximately 0.03 per cent. free iodine and 2 per cent. of iodine in combination with the fatty oil.

Thus, contrary to the published statements, Campetrodin is *not* a preparation of free (elementary) iodine and Campetrodin No. 2, Double Strength, does *not* contain twice as much iodine as Campetrodin.

The report of the Chemical Laboratory shows that the statements made in regard to the composition of Campetrodin and Campetrodin No. 2 are incomplete in some respects and false in others. In view of the Laboratory's findings it appears superfluous to inquire into the therapeutic claims made for the preparations. It is evident, however, that a solution containing practically no free iodine is not, as claimed by the Robins Company, "adapted for use wherever . . . iodine is indicated externally. . . ."

It is recommended that Campetrodin and Campetrodin No. 2 be declared inadmissible to New and Nonofficial Remedies because of false statements as to chemical composition and therapeutic action, constituting conflicts with Rules 1 and 6.

The Council adopted the recommendation of the referee and authorized publication of this report.

BOOK REVIEWS

FOOD IN WAR TIME. By Graham Lusk, Ph.D., Professor of Physiology, Cornell University Medical College, New York City. 12mo of 46 pages. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, 50 cents.

One might term this small volume "A Handbook of the Food Administration." By following directions and suggestions set forth we are conserving food in a practical manner, adhering to the dictates of the Food Administration and at the same time maintaining and preserving health. Can be easily understood and profitably used by everyone. N. V. C.

PRINCIPLES OF SURGICAL NURSING. A Guide to Modern Surgical Technic. By Frederick C. Warnshuis, M.D., F.A.C.S., Visiting Surgeon, Butterworth Hospital, Grand Rapids, Mich., Chief Surgeon, Pere Marquette Railway. Octavo of 277 pages, with 255 illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, \$2.50 net.

This book covers the scope of its title in a very acceptable manner. The various procedures are briefly but adequately described in language that a nurse can understand. The numerous illustrations add to the already clear book. Every nurse can add this book to her equipment with profit. The reviewer is supplying each of his nurses with a copy. A. E. H.

MEDICAL WAR MANUAL No. 6. Authorized by the Secretary of War and Under the Supervision of the Surgeon-General and the Council of National Defense. Laboratory Methods of the United States Army Compiled by the Division of Infectious Diseases and Laboratories, Office of the Surgeon-General, War Department, Washington, D. C. Illustrated. Publishers: Lea & Febiger, Philadelphia and New York. Price \$1.50.

The manual contains all the essential and prescribed technic to do any work that will be done in a clinical laboratory; the most recent and approved methods; the methods and formulas that have been found in the hands of experienced laboratory workers to be the most practical for clinical laboratories, especially where work has to be done and it is impossible to have an elaborate equipment as is true in many of the Army hospitals and camps.

The work is arranged in such a way that it is handy and convenient for reference. No attempt has been made to give the clinical significance of the laboratory findings; it simply gives a simple and efficient method for any sort of examination that is likely to be required in a clinical laboratory. It will be a help to any one doing laboratory work. W. C.

BLOOD TRANSFUSION HEMORRAGE AND THE ANEMIAS. By Bertram M. Bernheim, A.B., M.D., F.A.C.S. Instructor in Clinical Surgery, the Johns Hopkins University, Captain, M. O. R. C., U. S. Army. Author of "Surgery of the Vascular System," etc. Philadelphia and London, J. B. Lippincott Company. Price, \$4.00.

Two thirds of this book is devoted to the two chapters on the methods of transfusion and the indications for transfusion. Preference is given the citrate method and the Lindeman method is given second place. In the indications for transfusion, including lengthy case reports where the author displays little modesty in referring to his own dexterity and achievements, there is nothing new.

In the selection of a donor with suitable blood—the only difficult problem in blood transfusion—the book is weak.

It seems to the reviewer that in a book of this size on the subject of blood transfusion the author ought

to give evidence of at least some personal knowledge of the methods of testing bloods in selecting donors; and a more exhaustive explanation of the cause of reactions would greatly enhance the value of the book. Although this book is readable it contains nothing new. P. T. B.

NEUROSYPHILIS, MODERN SYSTEMATIC DIAGNOSIS AND TREATMENT. Presented in 137 Case Histories. By E. E. Southard, M.D., Sc.D., Bullard Professor of Neuropathology, Harvard Medical School; Director Psychopathic Department, Boston State Hospital; etc.; and H. C. Solomon, M.D., Instructor in Neuropathology and Psychiatry, Harvard Medical School; Acting Chief of Staff, Psychopathic Department, Boston State Hospital, etc. With an introduction by James Jackson Putnam, M.D. Octavo, 500 pages, with 25 fullpage illustrations, \$5. Boston: W. M. Leonard, Publisher, 1917.

As stated in the preface, this book is written primarily for the general practitioner and secondarily for the syphilographer, the neurologist, and the psychiatrist. It would be difficult to conceive how this purpose could have been better attained than by the present volume. The case histories have been admirably selected to illustrate almost every possible phase of the effects of syphilis on the nervous system, and the clear, brief discussion accompanying the cases add immeasurably to the value of each illustration. The chapter on treatment is not all that we could desire and yet it must be said that it covers about all the knowledge which we possess at this time concerning therapy in these conditions. The charts accompanying the text are very well selected and arranged, but rather difficultly accessible for ready reference because scattered throughout the whole volume, and not indexed. It is certain that if this book were read by the general practitioner there would be much less occasion to call on the neurologist or psychiatrist to recognize conditions of neurosyphilis. F. M. B.

A CLINICAL TREATISE ON DISEASES OF THE HEART. For the General Practitioner. By Edward E. Cornwall, Ph.B., M.D., Attending Physician, Williamsburg and Norwegian Hospitals; Consulting Physician Bethany Deaconesses Hospital, New York. Rebman Company, 1917. Price, \$1.50.

The author gives a rational and well-balanced description of the general and special diagnostics of heart disease and, as his own special contribution to the subject, introduces a method of palpation which he designates as "feel percussion." As the book is intended for the general practitioner and not for the specialist, it is concise though practical, and completely ignores those diagnostic methods requiring elaborate or expensive apparatus.

We note with some surprise the scant attention paid to focal infection as relating to either etiology or treatment. An essentially clinical treatise should devote full space to so important a matter, and it is to be hoped that later editions will remedy this defect.

The subject of general therapeutics of the heart is well handled until we come to the recommendation of cardiac tonics, of which the author regards strophanthus as far superior to digitalis. We cannot subscribe to his views as to either the relative superiority of tincture of strophanthus or the small dosages which he recommends. Some valuable hints as to easy life and easy diet are given, though we must take exceptions to his liberal allowance of liquids in diet list No. 4. We can conceive of no condition in cardiac disease in which a daily allowance of 75 ounces is necessary or even justifiable.

A brief but masterly article on cardio-vascular disease, in which he refers to the compensatory function of high arterial tension, is followed by some useful "therapeutic precepts." The book is a good one. It fulfills its purpose and we recommend it. R. T. L.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF LABORATORY METHODS. For students, hospital physicians and practitioners. By Charles E. Simon, B.A., M.D., Professor of Clinical Pathology and Physiological Chemistry in the University of Maryland Medical School and the College of Physicians and Surgeons, Baltimore. Ninth edition, enlarged and thoroughly revised. Illustrated with 207 engravings and 28 plates. Published by Lea and Febiger, Philadelphia and New York. Price, \$6.00.

The mere fact of reaching the ninth edition should be sufficient evidence of the value of a medical book. Five hundred and seventy pages of the new edition deal with questions of a technical character, the remaining pages with the presentation of the laboratory findings in various diseases. Such an arrangement of the subject matter meets the needs of the greater number of readers.

A particularly noteworthy addition to the chapters dealing with the blood is the description of ancestral types of the various leukocytes. More than twenty pages are devoted to the consideration of the leukocyte, four beautiful colored plates being shown, and sixty-five pages are devoted to the examination of the feces. Much has been added to the matter dealing with intestinal animal parasites. A fine colored plate pictures the ova in developmental stages of the most common animal parasites. Twenty-three pages are given to the consideration of the agglutinins and complement fixation, fourteen pages deal with the examination of the cerebrospinal fluid, in which is detailed the Lange colloidal gold reaction, while eight pages are devoted, and satisfactorily, too, to the determination of the existence of acidosis. The chapters dealing with the sputum and with the urine meet the requirements of a book of this character.

The fine illustrations, many of which are original, add much to its value.

Students, hospital physicians and practitioners will not be disappointed in Simon's Clinical Diagnosis.

F. E. M.

THE ELEMENTS OF THE SCIENCE OF NUTRITION. By Graham Lusk, Ph.D., Sc.D., F.R.S. (Edin.), Professor of Physiology at Cornell Medical School, New York. Third edition, reset. Octavo of 641 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$4.50 net.

This work is a most able and thorough exposition of recent experiments dealing with the problems of metabolism.

An introductory chapter gives a brief historical outline of some earlier work on nutrition, particularly that of Pettenkoffer and of Virchow, and emphasizes some fundamental conclusions, such as the "isodynamic law," governing the interchangeability of the food stuffs, and states that "the metabolism of the tissues, through its oxygen requirements and its carbon dioxide production, changes the condition of the blood and thereby regulates respiration."

Both in the very interesting introductory chapter and in three other chapters of the book the protein metabolism is thoroughly considered under the headings of "Nitrogen Equilibrium," "The Intermediary Metabolism," "The Fate of the Amino-Acids," and "The Respiratory Metabolism."

The factors influencing the reaction of blood and urine are fully dealt with, special reference being given to the ammonia output as well as to acidosis.

Several chapters are devoted to an account of experiments dealing with the metabolism of carbohydrates and fats from which conclusions are drawn that have a valuable clinical significance.

The chapters on "Food Requirements During the Period of Growth" are of particular interest just now, in the present food crisis; while the several chapters devoted to metabolism in certain pathologic states are of distinct value to the practitioner. Under this latter

heading we find details on observations on metabolism in fever, diabetes, nephritis, cardiac disease, and gout. The volume concludes with a practical dissertation on food economics.

This work shows great breadth and thoroughness of observation and is remarkable for the clarity with which it sets forth conclusions on the great variety of experiments described. It deserves the greatest commendation and is to be recommended as an invaluable book of reference to all interested in any branch of general medicine.

F. R. R.

RADIOGRAPHY AND RADIOTHERAPEUTICS. By Robert Knox, M.D. (Edin.), M.R.C.S. (Eng.), L.R.C.P. (Lond.), Consulting Radiologist, Great Northern Central Hospital, London, Hon. Radiographer, King's College Hospital, London; Director, Electrical and Radiotherapeutic Department, Cancer Hospital, London; Captain, R.A.M.C. (T.), Fourth London General Hospital (in charge of X-Ray Department). Part I, Radiography. With 78 Plates (one in color) and 337 illustrations in the text. New York: The Macmillan Company, 1917. Price, \$9.

The introductory deals with the elementaries of roentgen rays, Crookes tubes and electric current. Sources of electric energy and a description of various coils and transformers occupy forty-three pages, mostly taken from manufacturers' catalogues. The description of roentgen-ray tubes covers thirty-nine pages and is mostly manufacturer's copy. Tube stands, couches, compressors and screening stands, together with the arrangement of apparatus cover over fifty pages. This chapter also describes the military service installation.

The production of the radiograph together with a description of the dry plates, the intensifying screen and the photographic process, is described in fifteen pages. The chapter on stereoscopic radiography is used to illustrate the localization of foreign bodies by that method. Other well known uses of stereoscopic radiography are not mentioned. The localization of foreign bodies is thoroughly gone into. The reviewer while reading this chapter could not help but think of the many rules and regulations put down for figuring the exact spot of the offending body. To the roentgenologist who likes mathematics the localization of foreign bodies is an interesting study and at this time a very necessary qualification to those entering the country's service. Radiography as an aid to the surgeon and physician in war time is described in a few pages showing the localization of foreign bodies and showing shadows cast by gas gangrene. Radiography of the normal bones and joints together with the various positions used is well explained.

A chapter is devoted to the development of the bones. This chapter is intended to refresh the roentgenologist's memory on anatomy. To remember when an epiphysis joins the bone and to distinguish between an epiphysis and a fracture are of importance. Fractures of the bones from the head to the toes are shown.

Diseases of the bones are covered in seven pages with only a few of the commoner diseases shown. Diseases of the joints and their differentiation are well gone into.

The roentgen-ray examination of the thorax and its contents is an interesting and instructive exposition of the roentgen ray in that field. The various diseases are explained and well illustrated.

The alimentary system is covered in sixty pages. In so small a space the technic and only a bare outline of the roentgenologic signs can be given.

The urinary tract has five pages devoted to the technic of examination, the diseases of and the anatomic relations to the urinary organs.

This volume can be read with benefit by the roentgenologist of moderate experience. The book is well illustrated by good roentgenograms.

E. H. K.

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ORIGINAL ARTICLES

MEDICAL ASPECTS OF THE WAR

ROBERT E. SCHLUETER, M.D.
Major, Medical Reserve Corps, U. S. Army
ST. LOUIS

Although the care of the healthy and robust soldier is probably the most important function of military organization, the need of expert medical services is nevertheless an essential element of an army. To keep the unfit from gaining entrance, to keep the healthy and strong well, to restore the sick and disabled to their former place among the fighting forces and to eliminate from the ranks those who have become unfit for the service, are the special functions of army medical men. So, at the very beginning of the war our country called for medical men. The profession has responded. It has given many of its brightest lights. The younger men have joined in vast numbers. The strongest and healthiest are now in the several medical branches of our Army and Navy. And still the call continues and will continue as long as the Army and Navy are growing in size. The physicians will also continue to come in, but if those who are in charge do not keep on calling it will soon lead to the impression that the Army is well supplied with doctors. The resulting general indifference would be disastrous.

There are many kinds of men, if classified according to their qualifications, applicable to army service, and almost every kind of a man is serviceable for one thing or another. Few are fit to enter the service without some preparation.

Military medicine differs much from medical practice in civil life, and to take a motley collection of men and fit them into military duties is no small task. It is quite a hardship on many a man, but no doubt those who have charge of the work have their own peculiar troubles at the same time.

To any man who has led a life of choice, who has done those things which were to his liking, influenced only to a certain degree by forces beyond his control and those for the most part feeble, suddenly to shape his character, habits and physical exercise according to the will and orders of superior officers, is no easy matter. To be subjected to discipline after having been "your own boss" for a long time, is disagreeable, especially at first. One's adaptability to military life depends altogether on the individual. It is of course dependent on the plasticity of a man's mind and body, as well as the spirit with which he enters upon the work. Younger men are more adaptable than older ones. For that reason every young man who is in good physical condition should join either the Army or the Navy. Bodily fitness is of prime importance. Great physical strength is not needed. A person in good health will soon be in better health on account of the training which almost every military man necessarily must have. All men are morally obligated to join the ranks, but the young men have the greatest obligation. They can be more readily trained and are better able to stand the strain. There is a great need of medical men right now and more particularly those under 40 years of age. Every well educated and professionally trained doctor not yet in the service and under forty should apply for a commission in the Medical Reserve Corps. There will be enough of the older men and those physically unfit to take care of the patients at home.

In the history of human events there was seldom if ever such a need for professional men possessing special knowledge as exists in the present crisis. The medical profession is among those to whom the invitation is particularly extended, and they will certainly make the most of the opportunity offered. Thereby they will contribute much toward maintaining the integrity of our country—the greatest country on earth. They will also derive a definite amount of personal benefit therefrom, and they will be an integral part of a movement that cannot but

result in bringing the medical profession nearer to its deserved position in the affairs of the world. Never before have medical men seen their advice so gratefully received by a government and therefore they have a higher standing than formerly. When a country forces men to join the military forces, that country is obligated to provide for those men in the best way possible. Aside from giving them food, shelter and clothing, they must be protected against disease and also receive prompt and adequate medical and surgical attention whenever it is needed. All resources are used with a view of meeting this obligation to the "defenders of liberty." That we have succeeded is shown by the reports which are published from time to time. These show that there is less sickness in our camps than among the same number of young men in civil life. This contrasts very strongly with conditions in former times, and to medical science must be given the credit for this. Preventive medicine is responsible for the health of the Army. By the study of the insect carriers of disease, by the prevention of pollution of food and drink, by the selection of pure drinking water, and by the application of vaccine therapy we have succeeded in eliminating typhoid fever. This has lowered the morbidity and also materially lowered the mortality, but there are still a number of diseases prevalent among soldiers in camp that are by no means as definitely under control. Still, even in this war there has been considerable progress toward protecting the soldiers from infection and cross infection, particularly in diseases of the respiratory tract. I refer to keeping patients in cubicles and compelling them to wear masks and mouth guards.

It is particularly along surgical lines where the medical profession has shown its ability to aid in keeping the men "fit to fight" and making the unfit fit.

When a soldier develops an ailment which is caused by a focal infection, such as a chronic follicular tonsillitis, old nasal sinus infection or chronic otitis media, the otolaryngologists restore many of them to health. A tonsillectomy, drainage of the accessory nasal sinuses or a mastoid operation may be all that is necessary to prevent the discharge of an enlisted man on account of physical disability.

Where in former times great numbers of men were rejected because they had hernia or varicocele, they are now often admitted and in many instances relieved by a surgical operation when it is known that this affliction is the only thing that prevents them from being good soldiers. These are examples. There are other removable disabilities which medical science deals with in the Army. As one of the benefits

of this war may be mentioned the advance made in the treatment of wound infections. Early in the war many limbs were amputated which are now saved and that with a decidedly lower mortality. The treatment with hypochlorites and other antiseptics as well as the recognized value of mechanical cleansing are a decided advance on our former conception of the indications in treatment. It is a step nearer to the goal, though still apparently far from what we expect to attain. Still we have hopes of further progress. It may even eventually give us an ideal method of repair or certain remedies for the known varieties of infections.

Many physical defects, congenital and acquired, which are removed by the surgeon in the army would be retained by the patient and not be corrected because of ignorance, fear, superstition and other reasons. The capability of these men would be curtailed and they could never attain their full degree of efficiency. In the Army the treatment of these individuals is decided on and carried out by well trained specialists in all branches. These men are better able to judge what is best for the patient and therefore many men are benefited despite themselves and their own peculiar erroneous notions.

The office of the Surgeon-General will later be in a position to publish the results of the work of the Medical Department of the Army. The relative value of different methods might be cleared up. The statistics will be of great importance because of the large numbers of patients and the opportunities of following up the cases afterwards. The correction of defects will beyond a doubt also extend further than the betterment of military service. Let us hope that our losses will not be excessively great so that we may have a proportionately large number of those soldiers whose defects were remedied returned to civil life. Their improved physical condition will make them better men and citizens afterwards. If we are so unfortunate as to lose many men it is the more necessary that those remaining shall be more uniformly normal.

Thus we find medicine and surgery playing a rôle in modern warfare that was not thought of in former times. This brings a greater responsibility on us but one which is easily borne. With the care in selecting the young men admitted to the study of medicine and with the higher requirements for registration for the practice of medicine and with the wider dissemination of medical knowledge there are fewer divergent opinions regarding the fundamental scientific facts with which we are dealing. There may be arguments concerning the details, but we are pretty nearly agreed concerning most

of the underlying principles. To a great degree this is brought about by the spirit of the times, but we must not lose sight of the fact that the organized medical profession of the United States of America as represented in the American Medical Association with its component state associations and county societies has done at least an equal share of the work of shaping medical affairs in this day. With unselfish persistence it is using all its power toward raising medical ideals and endeavoring to eliminate the fallacies and falsehoods which have pervaded medicine since its origin. That it has met with success commensurate with the effort is not certain, but much good has come therefrom already. To continue further this standardization of medical and surgical knowledge and methods the government has established courses of professional instruction in different parts of the country, at camps and in connection with medical schools, civilian hospitals and research institutions. Great benefit will no doubt accrue from this. Not only will our government have at its disposal many men who are well grounded in the fundamental principles and details of that knowledge and which can be utilized in army medical service, but those who have had the advantage of the special training will be better able to resume their private practice at home after the termination of the war. Some will be specialists in branches which were previously closed to them.

Another phase of this war is the social hygiene question. The government is paying much attention to this and had been doing so long before the war. It is conferring with the local authorities at and near the location of army organization and commercialized vice is becoming more uncomfortable for the dealer than it is unhealthy for the customer.

The chief advisor of the men however is the regimental surgeon. He with his assistants is in closer relationship to the individual soldier and with the organization commanders than anybody else and the medical men are a tremendous influence for good in the matter of social hygiene. The Y. M. C. A., the K. C. and other movements are helping in every possible way. The regimental chaplains are doing all they can, and the morbidity from venereal diseases may be greatly diminished but by no means eliminated or even reduced to the minimum. Therefore, the medical profession must continue its propaganda and keep it up unremittingly until few if any soldiers are disabled by those diseases which not only interfere with their military efficiency but which may on their return home be a cause for much concern to them and their families. The medical profession should held in urging the people to see this condition

in its true light, not only in the cities near which troops are stationed, but everywhere. Moral housecleaning cannot be carried too far.

The individual girl and the soldier should not be overlooked. The hypnotic power of a military uniform has brought many a girl to grief. To obviate the dangers from indiscretions among young persons it requires a stronger movement among the laity than exists at present. Again the doctors will have to do their share in warning the public.

When the war was started the war spirit began to spread. It did not extend to all regions at once, but diffused somewhat slowly in some localities. During the thirteen months that have elapsed since our entrance into the war it should have reached every nook and corner of our great country. Every place where persons are banded together as a society for any purpose whatsoever, a part of that purpose must give way to activity which is aimed at the winning of the war. So every county medical society, no matter how small, must take a part in the war movement. The slightest indifference is nothing else but aid to the enemy, and the longer the war lasts the more evident it becomes that Germany must not win. If the United States is victorious there will probably never be another war; if Germany wins she will no doubt proceed to Prussianize the entire world and all past effort in behalf of liberty will have been in vain.

The object of any war is the prompt and complete submission of the enemy and nothing should be left undone to accomplish this object. Germany's great warrior Von Moltke said: "The greatest kindness in war is to bring it to a speedy conclusion." We are in this war not for gain but for humanity's sake. Whatever we accomplish will help more people outside the United States than within its limits. As individuals and as a nation we are not in this game because we like it, but because we felt ourselves driven into it. The sooner it is over the better for us. The harder and more intensely we go at it, the sooner it will be over. We have heard it said that the newspapers contain only war news and are therefore monotonously uninteresting. It is only proper that every other form of news should be subordinated to war news. It cannot be otherwise. We must always keep ourselves reminded of the war. Calmly and soberly approaching and considering the problems of the war, they should occupy all of our time and all of our best efforts. We should without interruption think about the war, talk about the war and work to bring it to a speedy conclusion. For win we must and win we shall.

Metropolitan Building.

ADDRESS OF WELCOME *

HON. FREDERICK D. GARDNER

Governor of the State of Missouri

JEFFERSON CITY

Gentlemen of the Missouri State Medical Association: I have had the pleasure of welcoming many organizations to the capital of the state, but I can truthfully say that it has never given me the degree of pleasure in the past that I feel today in welcoming this body of men to the state capital. (Applause.) The people today look upon the physician as a public benefactor. It is a remarkable thing that the poor man can receive just the same degree of your attention and the same benefit of your science and skill, as can the rich man; and outside of the ministers of the gospel I know of no men in this broad land who appeal so much to the average citizen as does the physician and the work that he is doing. And this is particularly noticeable at the present time, when so many of the prominent physicians of this and every other state have given their services on the battle field. It is a remarkable fact that the physicians, those among the most prominent in our land, have gone over to help the boys in their trouble.

I thought, at least for a moment, that I might at this time be in the United States Senate [laughter], but I am not; but if I had gone, one of the very first things I would have tried to do would have been to see that the physicians received the proper grade and rank for the work which they are doing in the Army today. (Applause.) I do not think it is fair that a great surgeon should be expected to leave his post at home, where he has such a great work, to go to the battle field and serve as a petty officer. I think a great surgeon is a great general, and I think he ought to be called a general and have the rank of a general when he is in the federal service. (Applause.) Now friends, I will talk plainly to you this morning. I will talk to you—not along the line of your work, because I am not going to dogmatize any theories in regard to your profession; but I will talk to you in the first place as stockholders in this great corporation called your state and government; and in the second place I will talk to you as citizens of this great nation of ours—and of the war. I will tell you about some of the things we are trying to do here as your public servants, things in which you should all be deeply interested.

In the first place it is necessary that a state, like a household or business enterprise, should in some way be founded on a sound and conservative basis. The state government should be managed so that the income and outgo are equal. If a state falls behind in its payments

it is in a bad fix. The people soon learn to know if a state is behind in its payments, and if it is derelict in its obligations they lose respect for the state government to a large extent. When I became governor of this state I found an obligation of two and a quarter million dollars scattered all over Missouri. All the eleemosynary institutions were in debt, the penitentiary was in debt, all the various departments of the government were in debt. I immediately saw that the first thing to do in this state was to place the finances upon a sound and safe foundation. I at once gathered all of these obligations together, amounting to two and a quarter millions, and then I went to bankers in St. Louis and I said, "I want you to loan me this money so that I may pay off the State debt and start with a clean slate." The lawyers immediately pointed to the law where it plainly says that a state has no right to borrow money—that a state cannot borrow money. But I kept on going from one lawyer to another, and after consulting about seventeen—and let me give you a little advice, if you want to win a law suit and you know you are right, keep on consulting with different lawyers until you find one that will agree with you, and then you will be sure to win. I went to the bankers in St. Louis and asked them to loan me this money, two and a quarter millions at 4 per cent. After taking a vote of the seventeen men, only four voted to loan me the money. I made a second appeal, and there were thirteen voted on it, and then I made a third appeal, telling what it meant to them as citizens of this state, and finally the seventeen men—all of the bankers in St. Louis—unanimously agreed to let me have the money for two years at 4 per cent. I borrowed the money and immediately paid off the state's debts, and last year, the first year of my administration, we paid every one of the bills for the running of this state government. Instead of spending five million two hundred thousand we spent four million fifty thousand, and save the State of Missouri for the first year one million one hundred fifty-six thousand, and did not owe a dollar to anybody. (Applause.) We managed the state last year on a \$1.20 per capita, the lowest cost of any state in the Union, the lowest in our history, and I think we gave you just about as good an administration as you ever had had, if I do say it myself.

The next thing to do was to provide a revenue so that the state institutions could be placed upon a proper basis, such as is demanded by the progressive citizenship of this commonwealth. I therefore submitted to the Legislature certain revenue laws, the first revenue laws that had been passed in sixteen years in Missouri. They all said that the governor cannot get revenue laws passed, the legislature will not be willing to step on this man's toes and that man's toes; but the truth of the matter is the patriotic legislature did pass the very rev-

* Delivered at the Sixty-first Annual Meeting, Missouri State Medical Association, Jefferson City, May 7, 1918.

enue laws I asked them to pass and they are on the statute books today and I expect we will receive from these revenue laws three million dollars, one million of which will be given to the public schools of the State of Missouri, and the other two millions will be given to pay off the debt which I found when I came here. On the first day of this month we had paid all of our running expenses, and have paid a half million on the old debt which I found when I came here.

What are the revenue laws? The principal one is the corporation tax. I am in a corporation myself. Why should I run my business as a corporation? Because the state gives a charter to the corporation; it gives it certain privileges which it does not give to the individual. The corporation is protected by the state and I believe every man who enjoys that privilege should pay a tax to the state of 75 cents per \$100 for his charter, and we passed that law and we will receive this year one million dollars from corporations of this state for the privilege of their franchises.

The next law was the income tax. I say that is the most just and equitable of all taxes. A man who has an income, who is permitted by his state to produce that income, should return a part of it to the state for the benefit of the state institutions; so we passed the income tax law in this state.

And the next law passed was the inheritance law. I say that every man who receives a legacy or a gift from his father or from some relative or friend—the state should receive a tax on that legacy. We exempted every widow to the extent of \$15,000 and every child to the extent of \$5,000, so that the inheritance tax was placed upon shoulders where it can be easily borne. We expect to receive from the inheritance tax some two millions this year.

Then we placed a tax on soft drinks and we doubled the saloon license. In other words, we have placed the burdens on shoulders where they can be most easily borne, and next year we will have your state entirely out of debt and will have some two million dollars to spend on the various institutions of Missouri.

One of the problems was the penitentiary problem. Every governor since the Civil War governor has recommended the abolition of the contract system. They all said the contract system was barbarous and that it should be done away with. The idea of these poor, unfortunate men being compelled to work for 75 cents a day and have the contractor grow rich from the labor of these poor men! All the governors have recommended that this be abolished, but when I came to Jefferson City I found the contractor in control of that institution. I was told, "You cannot drive the contractor out, because these inmates will starve." So I said, all right, this state may be busted, but I am not, and if this state cannot furnish

the money I will. But to make a long story short, we got the contractors out, and they will never go back. (Applause.) It was stated in the halls of the legislature that if the contractors were done away with in this state it would place a burden of \$1,000,000 on the taxpayers. Now the truth is that under the contract system there was a loss to the taxpayers last year of some \$350,000. In other words, if we had kept the contractors there under the same condition it would have cost the taxpayers of this state \$1,200,000 in addition to the sum received from the contractors. Now, what is the result today? I want you to go to that institution. Instead of costing the taxpayers \$350,000, it is not costing them a dollar today, because the penitentiary is making its own way, and we have saved the people \$1,200,000 on that deal.

But it is not the matter of the almighty dollar that concerns me so much, it is the other side, it is the social side of the question. What we are trying to do out there to those men is to reform and to preach Christianity and to preach education. We found some 400 men in that institution who could neither read or write, and now we have a school where they are being taught to read and write. We are going to erect a building out there that will seat 2,500 of these fellows, and we will have professional lecturers come there and try to make better men out of them as soon as we can. I believe there is a great work to be done among these unfortunate people—a great work to be done. It is true we cannot save them all; we do not expect to save them all; but do you not know the Master Himself said, "He who converteth the sinner from the error of his ways shall save a soul from death," and I feel that if I can save one poor man during my term that will be something to my credit in the hereafter—if I do nothing else as your governor. (Applause.) For years your penitentiary has been pictured all over the United States. Nothing was done for the men; they worked with the contractors standing over them with a blacksnake to earn 75 cents a day. All that has been changed. There are no contractors there, and these men are getting along and, as has been said on many occasions, the Missouri penitentiary has been pictured all over the country—but today it is pictured as a model penal institution, as the model penal institution of all America, and I claim that it is worth something to the citizens of Missouri. (Applause.)

The next question is the question of building roads. No man is more deeply interested in road building than are physicians. You use the roads more than any other class of men. Here is what we have done. We have taken it entirely out of politics. It is under a commission made up of two Democrats and two Republicans. I recommended to the legislature that they double the automobile tax, and that all of that money be given to the Good Roads Fund.

We now have in cash, in the Good Roads Fund in the treasury of this state, \$1,500,000 ready for work on the roads of Missouri. We have two road camps where we are using convicts, and we have 500 more convicts ready and willing to go out and build up the country roads. The counties of Missouri have a grand total of \$20,000,000 for the building of roads. Three thousand miles of state highway has been laid out, connecting every county in the state to every commercial center of this country. Of course, we are handicapped now by the war and the government does not wish to issue bonds because we want the people to buy Liberty Bonds; but as soon as the national government has been financed, then we will sell these bonds, and I predict that by the time my term of office has expired you will find Missouri has one of the finest systems of surface roads in this part of the land. (Applause.)

We expect to give the public schools of Missouri \$1,000,000—more than they have ever received per annum in the past. How could money be better spent than in making plans for educating the children in the one-room school-house? I speak of that because what little education I have received came from the public schools, and I never had an opportunity to attend the public schools after I was 12 or 13 years of age. So we expect to help the public school and the public school teacher, and I think we ought to pay these teachers higher salaries. (Applause.) I think it is a disgrace to the citizenship of Missouri that out of 20,000 school teachers 12,000 are receiving \$500 or less per annum. Think of it. Five hundred dollars per annum in times like these—school teachers, bright young women and men who ought to be at normal schools in summer so they could give your children better education in the winter, compelled to sew and plow to pay their board during the summer. No wonder the schools of Missouri rank thirty-seven instead of at the top. I tell you, the school situation is fierce, and it is time the taxpayers and good citizens should get behind these boards and all of this work along that line and see that the school teachers of Missouri receive living salaries. (Applause.)

I recommended to the last session of the legislature the enactment of a law providing a Board of Control for the eleemosynary institutions. I promised you that if you elected me governor I would conduct these institutions of Missouri on a plan that would be entirely satisfactory to you. I ask you today whether or not I have kept that pledge. I claim that your eleemosynary institutions today are in better condition from the standpoint of efficiency and from the standpoint of financial support which I have been able to get for them—are in better condition than in many years, and we shall improve them all the time. (Applause.)

This year I hope to recommend to the legislature the enlargement of all the eleemosynary

institutions of the state. Some of them need it sadly. There are 1,000 feeble-minded children on the streets of Missouri today who cannot be admitted to the school for feeble-minded at Marshall. I want to see conditions change so that we can take care of these children, so that we may perform our duty as we should do and I want your cordial support along this line. (Applause.)

I have tried to show my interest in your work by appointing the best men among your profession on the State Board of Health, and I call your attention to the fact that I have done so in appointing Dr. Clark, Dr. Ferguson and Dr. Cotton as members of the State Board of Health.*

These are a few of the things we are trying to do, but we have a lot of other work to do. The war has brought great duties on all of those in public life and of course the chief executive gives all of the orders of the federal government, they are sent to the executive's office and they must receive his final endorsement before they become operative and we have had some rather queer experiences along that line, particularly along the line of the draft. The other day I received a letter from a woman and she said: "I understand my husband is claiming exemption because he has three children and a wife, and that it is necessary for him to remain at home to support me and these children. I want to say to you, that man never gives me a cent and never supports these children, and I think he ought to go to war. Do not keep him here on that account." So I turned the letter over to one of my aides and said, "You had better send that man along." The next day I received another letter from her saying, "I didn't mean a thing I said; he is the best husband in the world and he would work his hands off for me and the children." Another day a negro woman came to me and said, "Are you going to take that Sam off to war?" I told her yes, I supposed so, and she said, "He gives me \$15 a month and I don't know what will become of this poor old nigger if you take that boy away." So I said to her, "He gives you \$15 a month?" "Yes." "Well, you know that if he goes to war the Government will send you \$30 a month." To this she replied, "Thirty dollars! Governor, take that nigger right away!" Then we have more serious cases. The other day I had a letter, in fact a gentleman came to see me, a farmer from over in Boone county. He came to see me and to make the statement that he required the service of his son on his farm; that he must have him back. I told him I would look the matter up and see what I could do. I took the matter up with the commanding officer, and said, "This looks like a serious case, and I hope that we can let this boy go home." The officer wrote back and

* Since making this speech the Governor has appointed Dr. E. P. North of St. Louis a member of the board.

said that when he took this up with the boy and offered to send him home, the boy said, "If you release me here I will not go home, but I will enlist some place else, because I want to fight." (Applause.) A mother came to see me not long ago and said, "Governor, my son has been drafted and he has three sisters and I am his mother. I do not want you to take that boy away." I asked her why and asked her if she did not realize the seriousness of this war, and why she did not want her boy to go. She said, crying, "I am afraid the boy might be killed." I said, "My good woman, suppose your son is killed and other boys are killed, and yet this country is preserved—could you ask for a more glorious death than that? If we lose this war what would become of you and these three sisters you speak of? Suppose you had these daughters brought into your home, as thousands of young women in France have been, carrying in their arms bastard children. Suppose your boy was used to make fertilizer for German farms, what would your life be worth to you and what would this country be worth to any of us? Then she burst into tears and said, "I never thoroughly understood this before. Take my son, and if he dies there I will glory in his death."

That is a part of the work we are trying to do in behalf of this just and righteous cause. It grieves me to notice in the press dispatches that the Socialist convention held in Chicago, representing 32,000 voters of that city alone, have adopted a resolution to the President of the United States asking him to recall Pershing and his glorious army from the fields of France. I am astounded to think that such a convention could have been held in any state in this Union and adopt such an insulting resolution as this. I do not think men who would vote for such a resolution are loyal citizens and I do not think they have any conception of the seriousness of the situation. Far from recalling Pershing's army from France, the thing to do is to mobilize the resources of this country and send ready equipped 5,000,000 recruits for Pershing. (Applause.) You and I and every patriot who has sons and relatives and friends under the colors would be willing to sacrifice our lives at home just as willingly as we would see them sacrifice theirs on the fields of France, and I know you feel as I do that I would rather see every member of Pershing's army buried in a soldier's grave than to see the Stars and Stripes lowered. (Applause.) And I want to say to you, as your chief executive, that no such convention as that could ever have been held in the state of Missouri. (Applause.) We were asked to recognize the Russian nation. Yes, recognize them, but recognize them as they ought to be recognized—as traitors. When our boys today are being shot down by the most brutal nation on earth and turned over to Trotskys and Lenines,

then we are asked to recognize them! They ought to be recognized—as criminals and traitors and placed on the gallows where they belong. (Applause.)

I want to commend the action of the state superintendent of schools of this state, who said that the German language should be dropped from the elementary schools of Missouri. (Applause.) It is time to separate the sheep from the goats; we must know who is for us and who is against us in this war, and I will make it my business to know who is for us and who is against us in the state of Missouri. (Applause.) In our early history the people got along very well with one language, and the greatest classic of all history, the Declaration of Independence, was written in the English language. When Lee and Grant met at Appomattox, they concluded peace by the English language. It was good enough for Andrew Jackson, and it has been good enough for one of the greatest Presidents of the United States, Woodrow Wilson. (Applause.) He used it to define the difference between autocracy and democracy in language that thrilled the human heart the world over, and if it has been good enough for this great country before this, it is good enough for your children and mine, and good enough for the public schools of Missouri. (Applause.)

The other night I had the honor of presenting to a distinguished audience here the governor of the state of Utah—Governor Rawlings—and heard him tell something of the story of his life. He said he came to America at the age of 13 as an immigrant in steerage, with 13 cents in his pocket. He could not read a word of English, knew practically nothing of his own language. He came from Germany, a poor young Jew boy. He has mounted the ladder up and up, and the American people have gathered him into their arms as they gather everybody, and that poor boy, uneducated as he was, has been lifted by the people of the state of Utah, who have placed the scepter of authority in his hands. What other nation on earth would have so received a 13-year-old Jew boy? No people would have been so generous. Now we have millions of such people among us here in this country. They have come here to enjoy the blessings of liberty, and we have given them the benefit of our great national resources, and I believe they should be our most patriotic citizens in this hour of our trouble. If they are not, then they deserve the fate of traitors, that is, they should be taken before a court-martial and shot. (Applause.) Right along this line I noticed the other day that in the city of St. Louis an Italian boy had died. I understand a few years ago he was absolutely penniless, but Louis Cella died worth \$12,000,000. That is your America. A few days ago it was my privilege to send to the United States Senate, Senator Wilfley. When I appointed that boy I did not appoint a boy that was educated in the uni-

versity, a man who was rich, but I appointed a farmer's boy, and a crippled boy at that, but a boy who has more than ordinary intelligence, who has more than the average brain, who is patriotic, and unless I mistake the signs he will support the President's administration and will make a senator that the people of Missouri will be proud of. But mark you this, I took time to study that man, I have been studying him, and I give you my word that we will not be disappointed in this farmer's son.

In conclusion, I want to thank you for the attention you have given me. I feel that I have trespassed upon your time, but I also feel that these are serious times. I know you are concerned with the great scientific questions that are close to your heart, but I feel nevertheless that it is well once in a while to get away from these questions and to know what your Government is doing and take an interest in those that are trying to do the right thing by you, to come and give them the right hand of fellowship and give them your support, because you are a powerful influence in your state. You are an educated class and you can be a great power for good in civic affairs, and as your governor I know that you will give your support at all times to those who are trying to do the right thing. I thank you for your attention. I am down at my office every day, and will be glad to have you come down at any time during your stay and shake hands with me. And further than that, I am occupying your house over there, known as the Governor's Mansion, which belongs to the state of Missouri. The Missouri governors have always been noted for their hospitality and the latch-string has always been out to the good people of Missouri. But my wife and myself have gone a step further and we have torn the knob off and the door is open, and God knows every one is welcome to come there and partake of our hospitality whenever they can. (Applause.)

THE RESPONSIBILITY OF THE MEDICAL
PROFESSION TO THE CRIPPLED
SOLDIER*

G. CANBY ROBINSON, M.D.
ST. LOUIS

The millions of wounded and crippled soldiers in the belligerent countries of Europe present to the world the greatest problem it has ever had to face in the care of human beings. It is a medical problem, a social problem, and perhaps most of all an economical problem.

Man-power must be conserved not only to win the decision of the battlefield, but also to

triumph in the great economic struggle to follow the war. In this process of conservation the medical forces must do their utmost to restore physical efficiency, while vocational training and industrial adjustment must continue with the work until each man is brought as near economic independence as possible.

Our country has been notoriously lacking in conservation of its resources, both natural and human. But now as we enter this war the lesson which should have been long ago learned faces us, to be learned in a hurry. If we fail now to learn it and take it to heart, long may be the time of our regret. The fact that necessity is about to teach us to save our resources and our men is a beneficial by-product of the war, and in these days, when our casualty lists have begun to come home to use, it is well to dwell upon some of the benefits our country is to gain by war.

It is estimated that of every million men sent overseas into service, one hundred thousand will come back permanently disabled for further service. Of these, twenty thousand will need to be taught new methods of their old trade or will need to be trained in a new type of vocation before they can become self-supporting. We must awaken to these facts, especially as the solution of these new problems depends upon a wide cooperation in all parts of the country from which our men have gone forth. The doctors who remain at home as well as those who go will have opportunities of sharing in the solution of these problems, and they should have a knowledge of the fundamental principles involved in refitting the disabled soldier for civilian life. Their service may be rendered directly to the soldier on his return both by medical attention and guidance or indirectly by helping to adjust public opinion so that the disabled soldier is most wisely helped.

I propose to review briefly, therefore, the main steps in the process of refitting the crippled soldier for civilian life and I shall try to point out wherein lies the opportunities and obligations of the profession in this matter.

The question that is being asked and answered throughout the world is, What is the best method of bringing the wounded and disabled soldier to the highest possible state of efficiency and happiness? Naturally, the answers from different parts of the world differ, because the solution of this problem must take into account many factors which are by no means constant. There are, however, some principles of fundamental nature which seems to be generally agreed upon.

First and foremost the disabled soldier must be provided with the best medical and surgical care that his nation can provide. From the moment the wounded soldier is reached by the

* Read at the Sixty-first Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6, 1918.

stretcher bearer until his release from military service, every possible need must be provided. The regimental surgeon in the dressing station, the doctor and nurse in the casualty clearing station, the medical force at the base hospital, must do their utmost to restore once more the man to military fitness.

If this cannot be done, the disabled soldier must be sent back to the part of the world from whence he came to be reconstructed and refitted for civilian life. In this process the importance of medical skill is obvious and need not be emphasized here.

The second principle which has been generally accepted is that the most perfect mechanical aids must be provided for the crippled. The mechanical devices employed by each man must be selected not only after a careful consideration of his injury, but also after the determination of the kind of work he is to do. Great advances have been made in the construction of artificial hands, arms and legs, notably by Amar of Paris. He has introduced accurate tests to determine the relative usefulness of various appliances, and the amount of fatigue engendered by their use. Many ingenious devices have been invented to enable the crippled to carry on various mechanical processes, and these are not limited to attachments to the limbs, but include braces, rings, belts, clamps, hooks and supports attached to various portions of the anatomy. The men with amputated hands are supplied with working hands and so-called "Sunday hands." Prizes and competitions have stimulated the production of the mechanical aids which are useful in refitting the crippled soldier for industry.

The third principle that has been generally recognized is that occupation must be provided for the disabled soldier who is to return to civil life as soon as he is able to do anything. It is during the period of convalescence that the battle of the spirit and the will is fought, and it is during this time that the disabled soldier decides what he will endeavor to make of his future. Useful and congenial occupation under the tactful guidance of a trained teacher may be of the greatest importance in directing the confused mind of the invalid into an attitude of hope and determination.

Occupation during the period of convalescence has also proved of great therapeutic value. It has been repeatedly pointed out that the natural exercise of a stiffened joint or an injured limb secured during the performance of some useful occupation is much more beneficial than the artificial exercise obtained by gymnasium or Zander apparatus of the so-called mechanotherapy. Sir Robert Jones, Military Inspector for Orthopedics of the British Medical Corps, emphasizes the importance of occupation for the

effect that is had on the mental moral and physical welfare of the disabled soldier. To illustrate the advantage of exercise, he takes a man with stiffened fingers. These may be exercised by spring dumbbells, which he endeavors to squeeze together during prescribed periods. But give that man a duster and "his mind is set on the dust he has to remove, not on the fact that his maimed hand is repeatedly taking hold of and letting go the duster."

Work during the period of convalescence is considered such an important aid to medical treatment in reclaiming the wounded to industrial life that a new term, "occupational therapy," has come into general use. The Federal Board of Vocational Education points out in a recently issued bulletin the requirements which occupational therapy teachers must fulfill and the qualifications they must have. The "occupational therapist," as these teachers are called, must have a background of both medicine and industry. He must be a master of the work he is teaching. "He must know how to restore self-confidence in the discouraged, how to awaken ambition in the disheartened, and how to develop perseverance in the restless. Quick results are necessary for the encouragement of some, painstaking accuracy for the progress of others. The occupational therapist must know the functions of muscles, how they may be exercised, how the brain may be stimulated or relaxed, and how the coordination of body and mind may be produced." Personality is the first qualification of the teacher, and the peculiar problems involved in working with the handicapped necessitate force, resourcefulness, tact, sympathy and courage.

The types of occupations that may be taught and carried out during the period of convalescence must cover a wide range. They may be divided into invalid occupations which are carried on in bed or in a chair, and occupational therapy which is carried out in class rooms and shops attached to the hospital. The choice of the work must depend upon the patient's previous education, inclination and physical condition. Primary education is of course of first importance, and no doubt some of our soldiers will have to be taught English. Basket making, typewriting, bookkeeping, mechanical drawing, net and hammock making, and leather work can be taught to men in bed. Shoe making, tailoring, wood-work, toy making and motor building are among the many useful trades that have been used in shops for occupation therapy that have been established in connection with some of the large hospitals abroad and in Canada. Gardening and chicken raising has been found useful, especially for men who prefer or require out of door work.

During the period of convalescence, occupa-

tion is necessarily secondary to medical treatment, and it can usually not go very far in teaching a new trade. The type of work during this period is determined by the medical needs as well as by the physical restrictions of the patients. Patients may be divided into those who will never recover sufficiently to compete in the industrial world with normal men, those who must have special vocational training after completion of medical treatment in order to enter the industrial world, and those who can enter industry as soon as convalescence is complete. These three groups of patients must go along different routes as soon as they have reached the point where hospital care is no longer an advantage in their medical treatment. During the period of convalescence the course that each man should follow later must be determined and emphasized to him, and each must leave the hospital with a clear idea of what is necessary thereafter for the best development of his future. He must also clearly understand where the assistance that he needs is to be found and how it is to be utilized. It is presumably at this time that the soldier obtains his discharge from the Army and returns to his home.

The social worker should have a recognized place with well defined duties in the reconstruction hospital, and should work in close cooperation with both the doctor and vocational teacher. The problems that are peculiar to the readjustment of each individual patient should be sought for and carefully considered. It should be the duty of the social worker to find out if possible where each man would be likely to fail along the road toward self-support and independence. These disabled soldiers will need encouragement, sympathy, and friendliness, and their attitude toward life will need perhaps as much training as their injured bodies. Months of invalidism, the patriotic praise and gifts showered upon the wounded soldier, and weary months of warfare are not conducive to determination to win a place in the world. The fact that the crippled soldier is to receive a well earned pension, too, is an obstacle to his determined efforts. These unavoidable forces must be met by experts trained in dealing with human adversity, and herein lies the field for the well trained social worker, who is accustomed to see clearly what is needed, and who is not hampered by sentimentality, which is so apt to hinder the work of the amateur.

When the disabled soldier leaves the hospital he presumably leaves the military service of his country. He is then ready either to enter into his previous career or he is ready for vocational training to fit him for the sort of activity his physical disability will allow. He has had all that hospital care can do for his medical and surgical needs, and he has had some training of

the body and mind to aid him to live and compete as an independent individual.

The fourth step in refitting the disabled soldier that has been established where large numbers of disabled soldiers have been cared for, is intensive vocational training, which will make him capable of maintaining himself and his family on the scale of living to which he is accustomed. This training must be taken up voluntarily and he must see and take for himself the opportunities that are provided. These opportunities must be found at or near his home, and so vocational training for disabled soldiers must be widely distributed throughout the nation. It is in the establishment of this process of readjustment that wide cooperation is necessary. Doctors, schools and teachers, employers, labor unions, individual industrial workers and the public at large must join forces in every community to train and place in industry the man who has suffered for his country.

Various methods have proved successful in providing the necessary training. In large cities trade schools have been established where the men may attend, either coming daily for their lessons or living in the school. Existing institutions have offered freely their facilities and have given special courses for the crippled. Universities, public schools and manual training schools have opened their doors and provided the special work required. At McGill University in Montreal the facilities of the engineering faculty have been placed at the disposal of the Invalided Soldiers Commission. The electrical laboratory, the steam laboratory, and a draughting room, with the services of instructors are available for returned soldiers in need of re-education. To meet the difficulties of providing vocational training, local committees or societies have been formed in the various countries at war. In England the local pension committees have this work in hand. Canada has been completely organized by provinces over which the central office of the Invalided Soldiers Commission has control. In each province there is a vocational officer under whose direction all local activities are carried out. In this country the rehabilitation of soldiers, crippled by disease or wounds, will be in the hands of the Federal Board of Vocational Training. A bill authorizing this board to conduct such work has been introduced into Congress and an appropriation of \$2,000,000 has been asked for to initiate it.

In directing his future course, the disabled soldier will have to be discouraged from accepting positions which are available during the duration of the war, but from which he will be displaced when the millions of men now in the armies of the world return to their usual occupations. He must be discouraged also from

depending on such work as the manufacture and sale of war souvenirs which will have but a passing value. He must be encouraged to prepare himself to win a secure place in the economic world which is not sustained by charity or sentiment. Both of these aids are sure to pass as the war becomes more and more a past event.

The opportunities and benefits of industrial training for the crippled soldier have been given wide publicity in the countries at war by means of pamphlets, posters, cards, moving pictures and talks in hospitals and camps. The many enthusiastic letters which have been written by trained cripples have been circulated and have proved of much value. It is especially encouraging to read the oft-repeated account of how, although physically disabled, many have improved their earning capacity by right training and now hold positions requiring greater skill and responsibility than before enlistment.

To summarize what has been said, the return of the disabled soldier to civilian life involves at least five distinct processes, each depending on and interweaving with the others. These are the best medical care, the use of carefully selected and properly devised mechanical appliances, occupational therapy, vocational training and, finally, the careful placement and oversight in industry. Of this last phase nothing has been said, but it is a large subject which cannot here be more than mentioned.

Let us now consider briefly the responsibilities of the profession toward the disabled soldier. These may be divided into at least three groups. Intelligent medical and surgical after-care, encouragement and psychological guidance, and constant efforts to shape public opinion in behalf of the disabled soldiers.

Intelligent medical and surgical after-care of the disabled soldiers means more than putting forth our best professional efforts. It means, as well, understanding something of the industrial conditions the men will be called upon to fill. It means also in the case of cripples the adjustment of artificial appliances to their work. The government proposes to carry out this work as far as possible, but doubtless, in many cases, readjustments to industry will be necessary months after the soldiers have gone from the control of the government, and in many instances men disabled in the war will soon come to depend once more on their own physicians. It is important that physicians should have some knowledge of the working conditions of their community, whether they are industrial, agricultural or mercantile. This knowledge should be used in advising and treating the disabled soldier who may be under their care. There is wide application of this principle in the care of the civilian population as well.

The fact that encouragement and treatment of the mind of the disabled soldier is of great importance in his rehabilitation has been already considered. The work must be continued by the doctor at home, and it is principally for this reason that an understanding of the disabled soldier problem is so desirable. These men must not be allowed to fall back when once they have made a start, and their determination must be especially stimulated after they have returned to their old surroundings. Perhaps no one is in so favorable a position as the doctor to encourage and guide, persuade and force the disabled soldier to put forth an effort to do work which is essential for the welfare of the state and for his own ultimate happiness. The government will provide the ways and means, but the inner man must do the rest, and the influence of the true physician on the inner man is or ought to be forceful and uplifting.

Lastly, the members of the medical profession must exert constantly their influence to obtain for the disabled soldier the hearty, general cooperation and assistance that he needs.

This subject has been admirably expressed by the Red Cross Institute for the Crippled and Disabled Men of New York, under the caption "A Square Deal for the Crippled Soldiers," and I cannot do better in closing than quote its words. "When the crippled soldier returns from the front, the government will provide for him, in addition to medical care, special training for self-support. But whether this will really put him back on his feet depends on what the public does to help or hinder. In the past the attitude of the public has been a greater handicap to the cripple than his physical disability. People have assumed him to be helpless. Too often, they have persuaded him to become so.

"For the disabled soldier there has been 'hero worship'; for the civilian cripple there has been a futile kind of sympathy. Both do the cripple more harm than good.

"All the cripple needs is the kind of job he is fitted for, and perhaps a little training in preparation for it. There are hundreds of seriously crippled men now holding down jobs of importance. Other cripples can do likewise, if given the chance.

"Idleness is the calamity too hard to be borne. Your service to the crippled man, therefore, is to find for him a good, busy job, and encourage him to tackle it.

"Demand of the cripple that he get back in the work of the world, and you will find him only too ready to do so.

"For the cripple who is occupied is, in truth, no longer handicapped.

"Can the crippled soldier count on you as a true and sensible friend?"

Washington University School of Medicine.

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EDITORIALS

SURGEON-GENERAL GORGAS

The people of today may not always be able to appraise with correctness the gifts of those of their fellow-men whose qualities appear to be of a commanding sort—men, possibly, of clear vision and high purpose, of light and leading, of personality and power—but as an instance of present times there are two such figures whose high position in the annals of the race can never be gainsaid; for their fame, nobly earned, rests on the bed-rock of things unselfishly done, and which the plain man everywhere can surely sense and truly value—men who in character, conscience, comprehension and insight, have commended themselves to a grateful world through lofty statesmanship and exalted principle in the beneficences of medical science and excellence of abilities that evidence the possession of sound judgment, high ideals and humane purposes; their aims—patriotic, philanthropic, physical and moral—being to lift the race to higher things and bring to pass the better time that shall recognize the universal kinship of the race and quicken into life a sense of common weal that shall make forever impossible the hideous spectacle which confronts the world today.

One of these figures is the official head of our nation, who speaks for it in such a crisis and whose word goes round the world with a power of convincing statement, a force of sincere conviction to mankind, such as human history has never before known, carrying, as it does, the gospel of justice and righteousness between nations, large and small.

The other, chief priest of preventive hygiene, world-wide in scope; apostle of scientific medicine whose hallowed mission is the salvation of everything that is human out of the wreckage and calamities of war—life, limb, soul, reason, health; and, as one dedicated to this divine purpose, future ages will fully recognize the abiding service of human help and deliverance abundantly rendered by the Surgeon-General of the Army—some of the chief pestilences that walk in darkness and waste at noonday having

been finally overthrown through his commanding scientific abilities.

The story of these achievements is well known to the world and need not be recited here; and the consciousness and contentment of the people everywhere because of the fact that these two men—one as commander of all the military forces of the nation, the other as head of the Army medical service—are working together toward the great ends in view has been a factor of immeasurable value in welding together our country as a unit in the one fixed and ruling purpose that free government among men shall not perish from the earth.

A man of gentleness, a master in medicine, a physician in every sense, a minister of mercy, a scientist known all over the world, Dr. Gorgas is a tower of strength in the cause of humanity; and a great multitude of his own countrymen and many thousands in distant lands will join in the prayer and sincere hope that he may long be spared to carry forward the work for which he is so eminently fitted, and to adorn the office that he so admirably fills. G. H.

THE SIXTY-NINTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION

The Chicago meeting of the American Medical Association, June 10-14, was one of the most enthusiastic sessions the Association has ever held. From the standpoint of attendance alone it produced a surprise for every one, the registration of 5,553 far exceeding the estimate of the most optimistic prophet; it was the largest registration since the previous session at Chicago in 1908. The number registered from Missouri was 180. It was very inspiring to observe the large number of Fellows in uniform and to see intermingled with the khaki of our soldier physicians the blue uniform of the French, and the khaki of the English and the Canadian armies.

The opening meeting of the Association was held in the Auditorium Theater on the evening of June 11 and attracted an audience that completely filled the theater. On the stage were seated, in addition to the officers and delegates of the Association, Surgeon-General Gorgas of the Army, Surgeon-General Braisted of the Navy, and the foreign guests, Sir Charles Mackenzie and Sir Arbutnot Lane, representing England; Major Edouard Rist and M. Justin Godart from France; Captain René Sand of Belgium, and Colonel Herbert Bruce from Canada. Dr. E. W. Fiegenbaum of Edwardsville, president of the Illinois State Medical Society, delivered the address of wel-

come; he was followed by Dr. Chas. E. Humiston of Chicago, president of the Chicago Medical Society, and the Honorable Frank O. Lowden, Governor of Illinois. President Mayo delivered a short address, introducing the president-elect, Dr. Arthur Dean Bevan of Chicago.

Throughout the entire meeting the importance of military surgery was so pronounced that scarcely a session passed without very considerable reference to military medicine and the participation in this phase of the meeting by one or more of the heads of our military forces and our foreign guests. On Wednesday evening there was another great military meeting held in the Medinah Temple, and on Thursday evening the patriotic meeting was held at the Auditorium Theater.

The House of Delegates began its session on Monday morning, June 10, and completed its work on Thursday noon. The secretary's report showed a total of 80,248 members of the Association on May 1, 1918, of which 44,715 are Fellows. The financial condition of the Association shows improvement notwithstanding the very disturbing conditions in the advertising field and the part which the Association is taking in mobilizing the medical profession, which required the expenditure of considerable sums of money.

The report of the Board of Trustees and the War Committee of the Association exhibit a large amount of labor performed by the organization in assisting the Surgeon-General to mobilize the medical profession for the Medical Reserve Corps. In commenting on the war work of the Association the report of the Board of Trustees says there seemed to be an idea in certain quarters that the Association had not made use of its opportunities or rendered the government the service it was capable of, and then says: "War was declared April 6, 1917. *THE JOURNAL* for April 7 contained four editorials in which it was stated that war was certain. These editorials emphasized the needs of the Army and of the Navy for medical officers, and called on the medical profession to be ready to respond. The following week it published the facts relative to the number of graduates available from medical colleges, and emphasized the importance of maintaining the supply of physicians through the medical schools. In the issue of April 21 it issued a call to the profession of the United States, through the county societies, to supply the Army with medical officers. In that issue were printed 65,000 blank forms for making application for commission in the Medical Corps, and also in the Reserve Corps, and the announcement was made that the Associa-

tion was prepared to send pamphlets, circulars and other information regarding the medical service of the Army and of the Navy. In addition to other information, regarding the Reserve Corps, *THE JOURNAL* on April 28 published the first list of medical examining boards. On May 26 it again published application blanks—this time 67,000. From this time *THE JOURNAL* carried on a propaganda to build up the Reserve Corps, and in other ways to cooperate with the Surgeon-General's office of both the Army and the Navy.

"In connection with this work there naturally has been a large amount of correspondence. Since the beginning of the war the Association officers have answered, both by letter and by publication, thousands of questions relative to the service, thus relieving the offices of the Surgeon-Generals of this burden. Besides the application forms contained in *THE JOURNAL* (132,000), the Association has printed and sent out over 60,000 additional forms, or a total of nearly 200,000."

The report of the War Committee of the Association, which was appointed Oct. 19, 1917, in response to the request of the Provost Marshal-General submitted a plan for a definite working proposition for the creation and supervision of Medical Advisory Boards, which was adopted by the Provost Marshal-General. In January of this year the War Committee learned that the medical aides to the governors were being advised by the Committee on State Activities, General Medical Board, Council of National Defense, that their work had been completed, and that their active duty would cease. An inquiry addressed to the office of the Provost Marshal-General brought a reply stating that under the Selective Service Regulations that office has, under the Secretary of War, sole and exclusive jurisdiction of the administration of the Selective Service Law and the proper steps had been taken to continue the services of medical aides to governors until such time as this office is satisfied that their services are no longer necessary.

"Under date of April 3 the Surgeon-General of the Army requested the cooperation of the American Medical Association and the state and county societies to utilize the organization and the machinery of the Association in addition to the activities of the other bodies, viz.: the Medical Section of the Council of National Defense and the different sections and organizations of the American Medical Association in securing future increments to the Medical Reserve Corps and keeping the numerical strength of the Corps up to the requirements of the Service. The Association immediately responded to this request and called a confer-

ence of the state secretaries, which was held at Chicago, April 30. At this meeting the entire day was devoted to the discussion of how the organized medical profession can be utilized effectively for the winning of the war and, specifically, how the American Medical Association, its constituents state associations and their component county societies can assist in enrolling the required increments for the Medical Corps of the Army and Navy. On the adjournment of the conference, the secretaries of the state associations returned to the several states with the determination to coordinate the forces of the organized medical profession in their states with other agencies working with similar objects."

Among the important actions of the House of Delegates was the adoption of a resolution declaring that it would be to the best interests of the nation if General Gorgas is continued in his present office of Surgeon-General of the Army, and that this expression be communicated to the President of the United States. The House indorsed the system of universal military training for young men, petitioned Congress to take favorable action on the Owen-Dyer bill, appealed to the members to confine their prescribing to products owned and manufactured by loyal citizens of this country or of our allies, whenever the interests of the patients permit.

The election of officers for the ensuing year resulted as follows: President-elect, Alexander Lambert, New York; first vice-president, William N. Wishard, Indianapolis; second vice-president, E. Starr Judd, Rochester, Minn.; third vice-president, C. W. Richardson, Washington, D. C.; fourth vice-president, John M. Baldy, Philadelphia; secretary, Alexander R. Craig, Chicago; treasurer, William Allen Pusey, Chicago; speaker of the House of Delegates, Hubert Work, Pueblo, Colo.; vice-speaker of the House of Delegates, Dwight H. Murray, Syracuse, N. Y.; Members of the Board of Trustees, Frank Billings, Chicago; Wendell C. Phillips, New York; Thomas McDavitt, St. Paul, and, to fill vacancy caused by the death of E. J. McKnight, for a term expiring in 1919, D. Chester Brown, Danbury, Conn. The next annual session will be held at Atlantic City.

The Chicago committee on arrangements are to be highly commended for the splendid results of this session. Nothing seemed to have been left undone that would contribute in any way to the comfort and entertainment of the Fellows and guests. The entertainment in honor of the House of Delegates was a very delightful affair and was very much appreciated by all who attended.

A PHARMACEUTICAL CORPS FOR THE ARMY

The present world war is stopping the onward march of civilization in many directions; it is even forcing disorganized retreat that will require decades to recover. But, on the other hand, the stress is making science, arts and industry accomplish a ten-year advance in one year.

In the United States it is bringing about a realization that the time of isolation with untold possibilities is past, and that the life of the individual and of the nation must be patterned so as to permit competition with the wide world. One result is that abuses and wrongs which in peace would have taken a decade of legislation to correct, are now adjusted in a single session of Congress.

In former days, the surgeon's apprentice handed out to his master's patients the desired decoctions and boluses; a similar situation exists today in the Medical Department of the Army, which is forced to depend on untrained men to perform the services that in private life the professionally trained pharmacist is required to perform. However, the cry for still greater efficiency in the Medical Department of the Army gives promise that ere long a corps of professionally trained pharmacists will be placed under the command of Surgeon-General Gorgas. A bill with this in view has been introduced in the House of Representatives by George W. Edmonds: "A bill to increase the efficiency of the Medical Department of the United States Army, to provide a Pharmaceutical Corps in that department, and to improve the status and efficiency of the pharmacists of the Army."

This bill, introduced in July last year, was referred to the Committee on Military Affairs, and, to judge by the activity and the enthusiasm of leading pharmacists, is likely to come before Congress during the present session.

The following are the essential sections of the Edmonds bill:

"Sec. 2. That the Army Pharmaceutical Corps shall consist of one pharmacist director, with rank of major, who shall be chief of the Pharmaceutical Corps, five deputy pharmacist directors, with the rank of captain, and such number of pharmacists, with the rank of lieutenant, and of pharmacist apprentices, as may be needed for the service.

"Sec. 3. That the Army Pharmaceutical Corps shall be charged with the following specific duties: To procure by purchase or manufacture all supplies of medicines, drugs, chemicals, pharmaceutical apparatus and hospital and surgical dressings necessary for the Medical Department of the Army; to determine the quality and purity of such supplies; to have

charge of the medical supply depots of the Army and the storage and safeguarding of such supplies; to provide for the issuance and distribution of such supplies and the dispensing of medicines in the various hospitals, dispensaries, infirmaries, trains and camps of the Army; to properly care for, regulate the dispensing, and to systematically account for all spirituous liquors and habit-forming drugs purchased for the department; to procure by purchase or manufacture such drugs, chemicals, reagents, tests and biologic products as are used in the laboratories and the medical and surgical practice of the department for the purpose of diagnosis, prophylaxis, or treatment; to account for all moneys received from sales of medical supplies, in accordance with the provisions of the Army regulations or disposed of by order of competent authority; to inspect the department's stores and supplies of drugs, medicines, hospital dressings, reagents, tests and biologic products and determine their deterioration and fitness for use; to cooperate with the other branches of the department in rendering first aid and wound dressing and in the making of diagnostic and chemical tests; to establish and maintain a systematic course of study and training, including the advances made in medicine, pharmacy and sciences allied thereto, to be pursued by the members of the Army Pharmaceutical Corps who are seeking promotion in the Corps."

USE OFFICIAL NAMES OF LICENSED DRUGS

In another column we publish a letter from Prof. Julian Stieglitz, chairman Subcommittee on Synthetic Drugs, National Research Council, concerning novocain and procain. In some quarters it has been questioned whether procain was identical with novocain, which caused the committee to institute an investigation of this subject, with the result that it was established that novocain and procain are identical. Professor Stieglitz, on behalf of the committee, also urges physicians to adopt the Federal Trade Commission's recommendation to use the official name of the licensed drugs in connection with all written articles, and if the proprietary brand name is to be used to place this side by side with the official name. The official names so far adopted by the Federal Trade Commission are:

Arsphenamine for the drug marketed as Salvarsan, Diarsenol and Arsenobenzol, etc.

Neorsphenamine for the drug marketed as Neosalvarsan, Neodiarsenol and Novarsenobenzol, etc.

Barbital for the drug marketed as Veronal.

Barbital-Sodium for the drug marketed as Medinal and Veronal-Sodium.

Procaine for the drug marketed as Novocaine.

Procaine Nitrate for the drug marketed as Novocaine Nitrate.

Phenyleinchroninic Acid for the drug marketed as Atophan.

ORDERS TO MISSOURI PHYSICIANS IN THE MEDICAL RESERVE CORPS

Below we print the orders affecting physicians from Missouri so that our members may have an idea of the movements of their friends in the service. We are indebted to the excellent service rendered by the *Journal of the American Medical Association* which prints these orders weekly for the entire country. We have excerpted those affecting Missouri physicians and have arranged them in alphabetical order. The orders follow:

Battersby, Lieut. Richard S., Shelbina, to Hoboken, N. J., for duty, from Pittsburgh.

Beedle, Capt. Hubert B., St. Louis, to Camp Upton, L. I., N. Y., for duty, from Army Medical School.

Bell, Capt. Charles T., Maryville, to Fort Bliss, Texas, base hospital.

Blanks, Capt. Charles L., Mexico, to Camp Grant, Rockford, Ill., base hospital.

Botts, Capt. McDowell, Mexico, to Rockefeller Institute for instruction in laboratory work and on completion to Army Medical School for duty.

Clapsaddle, Lieut. Clare J., St. Louis, to Camp Jackson, Columbia, S. C., base hospital.

Cooley, Capt. Edward L., St. Louis, to Fort Slocum, N. Y., as orthopedic surgeon, from Fort Oglethorpe.

Dorris, Lieut. Richard P., Jefferson City, to Fort Sam Houston, Texas, for duty.

Dowell, Lieut. Horace S., Clearmont, to Hoboken, N. J., for duty, from Fort Des Moines.

Elders, Lieut. Frank A., Bloomsdale, to Camp Pike, Little Rock, Ark., base hospital, from Fort Riley.

Finney, Lieut. William O., Chaffee, to Camp Pike, Little Rock, Ark., as a member of a board examining the command for tuberculosis, from Fort Riley.

Gasser, Lieut. Fred., Pierce City, to Camp McArthur, base hospital, Waco, Texas, from Fort Riley.

Gaston, Lieut. Samuel E., Meta, to Camp A. A. Humphreys, Accotink, Va., for duty, from Army Medical School.

Grim, Lieut. Ezra C., Kirksville, to Chicago, Ill., Presbyterian Hospital, for instruction, and on completion to Camp Dodge, Des Moines, Iowa, base hospital.

Haw, Capt. Uriel P., Benton, to Camp Jackson, Columbia, S. C., for duty.

Herrick, Major Harold C., St. Louis, to Manila, Philippine Islands, Philippine Department, for duty, from Fort McHenry.

Horigan, Lieut. Joseph A., Kansas City, to Fort Riley for instruction.

Hurford, Capt. Phelps G., St. Louis, to Rockefeller Institute for instruction in laboratory work, and on completion to Army Medical School for duty.

Hurton, Lieut. Joseph L., for duty from Camp Wadsworth, to Camp Crane, Allentown, Pa.

Jones, Lieut. Zachariah G., Kansas City, to Camp Hancock, Augusta, Ga., base hospital, from Williams-bridge.

Kirchner, Capt. Walter C. G., St. Louis, to Walter Reed General Hospital, Takoma Park, D. C., for duty, from Fort Oglethorpe.

Loeb, Capt. Virgil, St. Louis, to Camp Crane, Allentown, Pa., base hospital, from Camp Upton.

Lewald, Lieut. James, St. Louis, to Hoboken, N. J., for duty, from Camp Wadsworth.

Lienhardt, Lieut. Howard O., North Kansas City, to Hoboken, N. J., for duty, from Fort Oglethorpe.

Lynn, Capt., William J., Kansas City, to Camp Hancock, Augusta, Ga., as Sanitary Inspector, from Fort Riley.

Mark, Capt. Ernest G., Kansas City, to Hoboken, N. J., for duty, from Camp Sheridan.

McGennis, Lieut. Patrick, St. Louis, to Camp Zachary Taylor, base hospital, Louisville, Ky., from Mayo Clinic.

Meyers, Lieut. Henry A., Sedalia, to Camp Bowie, Fort Worth, Texas, as a member of a board examining the command for tuberculosis, from Fort Riley, Kan.

Mills, Lieut. Roy F., Odessa, to Camp Bowie, Fort Worth, Texas, as assistant to camp surgeon, from West Point.

Moreland, Lieut. George H., Butler, to Camp Dodge, Des Moines, Iowa, base hospital.

Niedringhaus, Capt. Ralph E., St. Louis, to Camp Doniphan, Fort Sill, Okla., base hospital, from Fort Oglethorpe.

Printy, Lieut. Louis E., St. Louis, to Camp Jackson, Columbia, S. C., for duty.

Rawhauser, Lieut. Jerome L., Greenville, to Manila, Philippine Islands, Philippine Department, for duty, from Camp MacArthur.

Shankland, Capt. James W., St. Louis, to Newport News, Va., for temporary duty, from Fort Oglethorpe.

Sharp, Capt. William L., Little Rock, to Hoboken, N. J., for duty.

Sheetz, Lieut. Robert, Orrick, to Camp Pike, Little Rock, Ark., as a member of a board examining the command for tuberculosis, from Fort Riley.

Simon, Capt. Frederick C., St. Louis, to Mineola, L. I., N. Y., Signal Corps Aviation School, for duty, from Dallas.

Smith, Lieut. George W., Kansas City, to Fort Riley, base hospital.

Sneed, Capt. Carl M., Columbia, to Hoboken, N. J., for duty, from Camp Lee.

Stewart, Capt. Edward L., Kansas City, to Hoboken, N. J., for duty.

Stewart, Lieut. John W., St. Louis, to Camp Lee, Petersburg, Va., base hospital, from Fort Oglethorpe.

Tilton, Lieut. Welcome E., Grant City, to Hoboken, N. J., for duty, from Fort Riley.

Timberman, Lieut. John H., Marston, to Mineola, L. I., N. Y., Signal Corps Aviation School, for duty, from Austin.

Wilkinson, Capt. Hugh, Kansas City, to Walter Reed General Hospital, Takoma Park, D. C., for duty.

Wittwer, Lieut. Hugh J., St. Louis, to Camp Upton, L. I., N. Y., for duty, from Army Medical School.

Wyer, Major Henry G., Kirkwood, to Washington, D. C., for duty in the Surgeon-General's Office, from Jefferson Barracks.

OBITUARY

JOHN W. DEAN, M.D.

Dr. John W. Dean of Maryville, a graduate of Rush Medical College, 1863, and of Jefferson Medical College, 1864, died at Plattsmouth, Neb., June 12, 1918, age 76. Dr. Dean was a pioneer physician in Northwest Missouri and practiced in that district for more than 45 years. He was for many years very active in the medical societies and retained his membership in the county and state organization until a few years ago, when he retired from active practice. He was a breeder of cattle and gave much attention to this occupation during his leisure time. He is survived by a daughter and a son, Dr. L. E. Dean of Maryville.

WILLIAM G. DRAKE, M.D.

Dr. William G. Drake of Bolivar, a graduate of the St. Louis Medical College, 1877, died at his home May 19, age 73. Dr. Drake was a pioneer physician in Polk County, first locating near Orleans then moving to Fair Play. In 1882 he moved to Bolivar, where he continued in active practice until declining health compelled him to retire. He was born at Bull's Gap, Tennessee, and at the age of 16 he joined the Union Army when the Civil War broke out, serving for three years. His widow and five children survive him, among whom are two physicians, Dr. W. D. Drake of Bolivar, and Dr. J. Carl Drake, formerly of St. Louis, now at Fresno, California, and a dentist, Dr. Joe A. Drake of Bolivar.

FRANK V. FRAZIER, M.D.

The third member of our Association to pay the supreme sacrifice in the frightful war of the nations was Dr. Frank V. Frazier of Altamont, Daviess County, first lieutenant in the Medical Reserve Corps of the Army. Dr. Frazier was one of the most promising young men in our Association and entered the Medical Reserve Corps soon after war was declared. He was only 29 years old and had practiced but a few years, having graduated from the Nashville and Tennessee University Medical Department in 1911. He saw much active service in France and suffered from a gas attack last November, but went back to his duties as soon as he recovered. On March 24 he was wounded in a bombing attack and died April 3 in a military hospital in France. He was a member of the Daviess County Medical Society and the State Association. He leaves a widow and a small son.

CHARLES R. LONG, M.D.

Dr. Charles R. Long of Sedalia is the fourth member of our Association who has died in the service of his country in the war with Germany. Dr. Long graduated from the National University of Arts and Sciences, St. Louis, 1916, and served as an intern at the St. Louis City Hospital for eight months, when he accepted the position of house surgeon in the M. K. & T. R. R. Hospital at Sedalia. He was a native of Arkansas, and was only 26 years old when he was killed by a shell in the front line in France, April 26, 1918. He was a first lieutenant in the Medical Reserve Corps, and had given a good account of himself in the base hospital to which he was attached—the Fifty-Eighth London Division Base Hospital in France. On April 19 he had been ordered to front line duty, and remained at that post until the night of the 26th, when he was relieved. He had started back to his quarters when the road was shelled, and he received the wounds that killed him. Dr. Long was one of Sedalia's most promising young physicians, and his loss will be deeply mourned by the profession and his many friends who had learned to admire him.

WILLIAM L. BROSIUS, M.D.

Dr. W. L. Brosius of Gallatin, one of the leading lights in our Association; a physician who was beloved by every citizen in Daviess County and surrounding counties; a steadfast and loyal member of our Association, died April 18 while seated in his office and in apparent good health, from angina pectoris, aged 65. He was a self-made man and worked industriously to obtain both his preliminary education and his medical degree, which latter he took from the Missouri Medical College, now the Washington University Medical School, in 1900. He began practicing at once, locating in Gallatin, which was his birthplace, and continued active and progressive in every phase of medical advancement until the hour of his death. During the past few years Dr. Brosius devoted his energies and talent to roentgenology, in which he was unusually successful. Dr. Brosius served the Association in many important positions, and always gave his time and service to the affairs of the organization without stint, as was his nature to do in anything he undertook. His loss will be keenly felt by the medical profession, and the community in which he lived will miss a good man gone to his reward, and an excellent physician whose labors have ended.

NEWS NOTES

DR. B. M. COLBY, assistant physician at State Hospital No. 2, St. Joseph, has accepted the position of superintendent of the General Hospital at Kansas City.

DR. T. R. FRAZER of Commerce has been appointed assistant physician at State Hospital No. 4, Farmington, in place of Dr. F. L. Long, who has accepted a commission in the Medical Reserve Corps of the Army.

DR. PAUL E. COIL of Mexico has purchased a residence in that city which will be remodeled and adapted to hospital uses. The plans call for accommodations for 14 patients with the equipment modern throughout. The hospital will be opened about July 15.

THE Missouri Commission for the Blind, St. Louis, recently prosecuted successfully through the St. Louis Department of Health, Mrs. Ida Diamant, a local midwife for her failure to report a case of ophthalmia neonatorum. Fortunately only one eye of the baby will be permanently blind, the other having been saved by skilled medical attention obtained through the Commission. The midwife was fined \$25. This is the second successful prosecution of failure to report and properly care for a case of ophthalmia neonatorum, undertaken by the Commission.

ON June 24 Dr. A. H. Sewing of St. Louis, Captain in the Medical Reserve Corps of the Army, was reported missing since May 27. Captain Sewing enlisted in the Medical Reserve Corps soon after war with Germany was declared, and in July, 1917, was sent to England and attached to a base hospital in London. He remained there until January, when he was sent to the front and appointed Regimental Surgeon of the 8th Durham Light Infantry, holding that station until he was reported missing. Shortly before his departure for England, Dr. Sewing was married to Miss Mabel Rees of St. Louis. He is a graduate of the Washington University Medical School, 1909, and served as intern and resident physician in the St. Louis City Hospital until 1914, when he entered private practice in St. Louis. He has been a member of the St. Louis Medical Society and the State Association since his graduation, and is a Fellow of the American Medical Association.

MEMBERSHIP CHANGES, JUNE

NEW MEMBERS

Campbell, Watson, Kansas City.
 Cerny, George V., St. Louis.
 Davis, J. J., Kansas City.
 Dearing, W. A., Hardin.
 Dysart, Wm. P., Columbia.
 Grim, E. C., Kirksville.
 Marriott, W. McKim, St. Louis.
 Potter, A. E., Springfield.
 Ratliff, H. L., Webb City.
 Turner, W. L., Calloway.
 Tyree, Jas. I., Kansas City.
 Underwood, R. H., Kansas City.
 Walker, L. L., St. Louis.
 Weinberg, Abraham, Kansas City.
 Wiley, Michael, Wentworth.

CHANGES OF ADDRESS

J. S. Cannon, Anderson, to Baxter Springs, Kan.
 C. H. Carryer, Unionville, to Des Moines, Ia.
 Frank Cohen, 1225 Grand Ave., to Rialto Bldg., Kansas City.
 H. N. Corley, St. Paul, to Webster Groves.
 W. B. Hight, Queen City, to Des Moines, Ia.
 F. Kolbenheyer, 2006 Lafayette St., St. Louis, to 112 N. 31st St., Omaha, Neb.
 W. H. Littler, Easton to Clarksdale.
 Carey L. Ramsey, Napoleon, to Wellsville, Kan.
 Wm. T. Reynolds, Argyle Bldg., to Rialto Bldg., Kansas City.
 E. G. Rhodius, Potsdam, to Swiss.
 J. J. Singer, Carleton Bldg., to Metropolitan Bldg., St. Louis.
 Stephen D. Smith, Cowgill, to Columbia.
 Geo. R. Thompson, Corby-Forsee Bldg., to 2202 Goff Ave., St. Joseph.
 W. M. Campbell, Seneca to Vinita, Okla.
 P. L. Gardner, Gilman City, to Gallatin.
 M. G. Roberts, Marshfield, to Conway.

REINSTATED

O. J. Cunningham, Kansas City.

TRANSFERRED

E. V. Rawlins, Appleton City, transferred from Greene County Medical Society to St. Clair County Medical Society.

DECEASED

W. G. Drake, Bolivar.
 J. W. Dean, Maryville.

CORRESPONDENCE

PROCAIN AND NOVOCAIN
IDENTICAL

To the Editor:—It appears that in certain quarters the attitude is taken that the local anesthetic sold as procain is not identical with that marketed as novocain. The Subcommittee on Synthetic Drugs of the National Research Council believes it important that this misunderstanding should be corrected, and hence offers the following explanation:

The monohydrochlorid of para-amino-benzoyldiethyl-amino-ethanol, which was formerly made in Germany by the Farbwerke vorm. Meister, Lucius & Bruening, Hoechst A. M., and sold under the trademarked name Novocaine, is now manufactured in the United States. Under the provisions of the Trading with the Enemy Act, the Federal Trade Commission has taken over the patent that gave monopoly for the manufacture and sale of the local anesthetic to the German corporation, and has issued licenses to American concerns for the manufacture of the product. This license makes it a condition that the product first introduced under the proprietary name "Novocaine" shall be called Procaine, and that it shall in every way be the same as the article formerly obtained from Germany. To insure this identity with the German Novocaine, the Federal Trade Commission has submitted the product of each firm licensed to the American Medical Association Chemical Laboratory to establish its chemical identity and purity, and to the Cornell pharmacologist, Dr. R. A. Hatcher, to determine that it was not unduly toxic.

So far, the following firms have been licensed to manufacture and sell procain:

The Abbott Laboratories, Ravenswood, Chicago.

Farbwerke-Hoechst Company, New York, N. Y.

Rector Chemical Co., Inc., New York, N. Y.

Calco Chemical Company, Bound Brook, N. J.

Of these, the first three firms are offering their products for sale at this time and have secured their admission to New and Nonofficial Remedies as brands of Procaine which comply with the New and Nonofficial Remedies standards.

While all firms are required to sell their product under the official name "Procaine," the Farbwerke-Hoechst Company is permitted to use the trade designation "Novocaine" in addition, since it holds the right to this designation by virtue of trademark registration.

In conclusion: Procain is identical with the substance first introduced as novocain. In the interest of rational nomenclature, the first term should be used in prescriptions and scientific contributions. If it is deemed necessary to designate the product of a particular firm, this may be done by writing Procaine-Abbott, Procaine-Rector, or Procaine-Farbwerke (or Procaine [Novocaine brand]).

Yours truly,

JULIUS STIEGLITZ,

Chairman Subcommittee on Synthetic Drugs,
National Research Council.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Taney County Medical Society, Nov. 17, 1917.
- Webster County Medical Society, Nov. 21, 1917.
- Wright County Medical Society, Dec. 3, 1917.
- Schuyler County Medical Society, Dec. 4, 1917.
- Platte County Medical Society, Dec. 5, 1917.
- Madison County Medical Society, Dec. 17, 1917.
- Livingston County Medical Society, Dec. 19, 1917.
- Ste. Genevieve County Medical Society, Dec. 22, 1917.
- Benton County Medical Society, Dec. 24, 1917.
- Adair County Medical Society, Dec. 27, 1917.
- Carter-Shannon County Medical Society, Jan. 9, 1918.
- Chariton County Medical Society, Jan. 11, 1918.
- Holt County Medical Society, Jan. 21, 1918.
- St. Clair County Medical Society, Jan. 21, 1918.
- Barton County Medical Society, Jan. 22, 1918.
- Henry County Medical Society, Jan. 24, 1918.
- Moniteau County Medical Society, Jan. 28, 1918.
- Camden County Medical Society, Feb. 1, 1918.
- Scott County Medical Society, Feb. 2, 1918.
- Cedar County Medical Society, Feb. 8, 1918.
- Clark County Medical Society, Feb. 8, 1918.
- Cooper County Medical Society, Feb. 13, 1918.
- Atchison County Medical Society, Feb. 18, 1918.
- Ralls County Medical Society, March 10, 1918.
- Pulaski County Medical Society, March 11, 1918.
- Pemiscot County Medical Society, March 25, 1918.
- Cape Girardeau County Medical Society, March 28, 1918.
- Vernon County Medical Society, March 28, 1918.
- Putnam County Medical Society, April 11, 1918.
- Cass County Medical Society, April 13, 1918.
- Laclede County Medical Society, April 15, 1918.
- Clay County Medical Society, May 2, 1918.
- Newton County Medical Society, May 2, 1918.
- Jefferson County Medical Society, May 8, 1918.
- Pettis County Medical Society, May 11, 1918.
- Johnson County Medical Society, May 31, 1918.

Missouri State Medical Association

**Sixty-First Annual Meeting, held at
Jefferson City, May 6, 7, 8, 1918**

MINUTES OF THE HOUSE OF DELEGATES

House of Representatives

Monday, May 6, 1918—Morning Session

The House of Delegates was called to order by the Acting President, Dr. W. A. Clark, Jefferson City, at 9:45 a. m. Dr. Clark announced that the President, Major Robert E. Schlueter, would not be able to attend the meeting and that no one more regretted it than he. He said, "I preside not without considerable trepidation and I ask your indulgence and help." The following delegates were present:

<i>County</i>	<i>Delegate</i>
Adair.....	J. S. Gashwiler, Novinger
Buchanan.....	J. F. Owens, St. Joseph
Buchanan.....	H. S. Forgrave, St. Joseph
Caldwell.....	O. N. Thompson, Breckenridge
Cape Girardeau.....	G. B. Schulz, Cape Girardeau
Cass.....	H. Jerard, Pleasant Hill
Chariton.....	J. Franklin Welch, Salisbury
Clay.....	H. J. Clark, Excelsior Springs
Cole.....	F. W. Gilham, Jefferson City
Dallas.....	F. A. Hudson, Buffalo
Franklin.....	John Isbell, Washington
Gasconade-Maries-Osage.....	J. O. Cooper, Linn
Greene.....	J. C. Matthews, Springfield
Greene.....	J. W. Love, Springfield
Grundy.....	E. J. Mairs, Laredo
Holt.....	J. F. Chandler, Oregon
Howard.....	C. H. Lee, Fayette
Howell.....	H. C. Shuttee, West Plains
Jackson.....	J. Q. Chambers, Kansas City
Jasper.....	A. B. Clark, Joplin
Johnson.....	L. J. Schofield, Warrensburg
Laclede.....	W. O. Poole, Stoutland
Lafayette.....	Wm. A. Braecklein, Higginsville
Lawrence-Stone.....	H. L. Kerr, Crane
Madison.....	A. C. Anthony, Fredericktown
Marion.....	J. J. Bourn, Hannibal
Mercer.....	C. P. Pickett, Mercer
Miller.....	E. C. Shelton, Eldon
Mississippi.....	A. H. Marshall, Charleston
Moniteau.....	J. P. Burke, Jr., California
Pemiscot.....	L. E. Cooper, Cooter
Perry.....	Theo. F. Estel, Altenburg
Pettis.....	Guy Titsworth, Sedalia
Pike.....	T. Guy Hetherlin, Louisiana
Platte.....	H. M. Clark, Platte City
Pulaski.....	E. A. Oliver, Richland
Ralls.....	T. J. Downing, New London
Ray.....	W. G. Estill, Lawson
St. Clair.....	E. C. Peelor, Lowry City
St. Louis City.....	R. M. Funkhouser, St. Louis
St. Louis City.....	W. E. Holdenried, St. Louis
St. Louis City.....	William Kerwin, St. Louis
St. Louis City.....	R. S. Vitt, St. Louis
St. Louis City.....	E. P. North, St. Louis
St. Louis City.....	Elsworth Smith, St. Louis
St. Louis City.....	Joseph Grindon, St. Louis
St. Louis City.....	L. C. Boisliniere, St. Louis
St. Louis City.....	P. Y. Tupper, St. Louis
St. Louis City.....	Walter Baumgarten, St. Louis
St. Louis County.....	Horine Miles, Webster Groves
Scott.....	P. M. Malcolm, Sikeston
Sullivan.....	A. W. Widner, Newtown
Taney.....	Guy B. Mitchell, Branson
Vernon.....	J. M. Yater, Nevada

Dr. H. C. Shntee moved that the reading of the minutes of the Springfield meeting be dispensed with and that they be adopted as published in the Journal. Seconded and carried.

The President, Major Robert E. Schlueter, sent the following message to the members of the House of Delegates, which was read by the Secretary:

To the House of Delegates, Missouri State Medical Association:

I regret deeply my inability to meet with you at this time.

When I accepted the Presidency of the Association I had no thought of entering the Medical Reserve Corps. At that time there were few who had any conception of what this war would demand of us. Even at this time no one can foretell what must yet be done to accomplish the end which we have set out to attain.

I am extremely sorry that my plans of coming home to join you did not materialize. Although my leave of absence had been granted, it became evident on the day before my intended departure from this station that I should remain here just at this time. It is essential that we must all sacrifice our personal and local interests and guard the interests of the whole.

I feel that you will pardon my neglect of the duties of this office to help our country in the present crisis; and I have but one recommendation, which is: That you use every means at your disposal to bring every available man in Missouri into the service of his country.

With cordial greetings to all members and the hope that you will have a profitable and successful meeting, I am, very sincerely yours,

(Signed) ROBERT E. SCHLUETER,
Base Hospital, Camp Hancock, Augusta, Ga.

Dr. Funkhouser moved that as a body we approve of the recommendation of the President, Dr. Schlueter, and that he be communicated with and informed of the action here taken upon his recommendation, including for him our congratulations and best wishes. Seconded and carried.

The Acting President announced the following appointments as Acting Councilors:

Second District—H. S. Forgrave, St. Joseph, to serve in place of O. C. Gebhart.

Fifteenth District—M. P. Overholser, Harrisonville, to serve in place of H. S. Crawford.

Eighteenth District—G. M. Moore, Linn Creek, to serve in place of J. B. Norman, who has moved from the state.

Twenty-Third District—L. E. Cooper, Cooter, to serve in place of J. H. Timberman.

Twenty-Sixth District—J. A. McComb, Lebanon, to serve in place of W. H. Breuer.

The report of the Committee on Arrangements was called for and Dr. W. A. Clark stated: On behalf of the Committee on Arrangements of the Cole County Society, I wish to state that there will be no entertainments today. Tonight we have a military program here in the House of Representatives. Tomorrow afternoon we are going to ask the members and their wives or any ladies in the city in attendance at this meeting to meet at the Central Hotel for an automobile ride around the city and adjacent country. We will return in time for dinner. After dinner the convicts at the penitentiary have arranged a musical and vaudeville show at 8 o'clock. I assure you that the show will not be any amateur affair and that the music will be splendid. We are very anxious that you avail yourselves of this entertainment. The exact time of the automobile trip will be announced later.

On motion seconded and carried, the report of the Committee on Arrangements was adopted.

Dr. A. R. McComas read the report of the Judicial Council, as follows:

REPORT OF THE JUDICIAL COUNCIL

The Executive Committee of the Judicial Council submits the following report:

Three meetings of this committee have been held during the year.

The committee was asked to rule on the question of who shall pay the state assessment for members of county societies in the Medical Reserve Corps. The committee decided it had no authority to rule on this question, as it amounted to a suspension of the by-law requiring annual payment of the state assessment, but recommended to the county societies that the societies pay out of the county society treasury the state assessment of their members in active service in the Medical Reserve Corps. Many societies have done this, and many members of the Medical Reserve Corps have paid their county and state dues as usual. By corresponding with other state associations we have learned that county societies throughout the country are paying the state assessment of their members, with few exceptions. It seems to the committee that the burden of paying the state assessments would fall very lightly upon the individual county societies, but if the State Association undertook to bear the loss it would seriously embarrass the activities of the Association. It is very evident that our expenses will be materially increased this year, and our JOURNAL, which is now self-supporting, will lose many valuable advertising contracts if the subscription list is reduced.

Dr. J. H. Elliott of West Plains, Councilor of the Twenty-Seventh District, died Sept. 25, 1917, and Dr. H. C. Shuttee, of West Plains, was appointed to fill the vacancy until the annual meeting.

Dr. Gail D. Allee, our Treasurer, has been commissioned a Captain in the Medical Reserve Corps and was called to active service on April 3. The committee has appointed his brother, Mr. H. P. Allee, Cashier of the Miller County Exchange Bank, Olean, Acting Treasurer.

Charters were issued to Dallas County Medical Society, a newly organized society, and to the hyphenated society of Wright-Douglas; Worth County Medical Society was reorganized, thus leaving only seven counties in the state unorganized.

The committee's attention was called to a newspaper advertisement of a member of one of the county societies. The committee at once notified the county society of this breach of medical ethics and the practice was discontinued by the member.

We recommend that \$1,000 be added to the sinking fund.

Dr. Funkhouser moved that the report be adopted. Seconded and carried.

Dr. E. J. Goodwin read the annual report of the Secretary-Editor. (See page 270.)

Dr. R. M. Funkhouser moved the report be adopted. Seconded by Dr. Hawkins and carried.

Dr. John Isbell announced that Dr. C. F. Goodrich of New Haven, Franklin county, a non-member of the Association, had been reported missing in France but has been heard from as a prisoner in Germany.

Dr. Guy Titsworth, Sedalia, reported the recent death in action of Lieut. C. R. Long, a member of the Pettis County Medical Society.

Dr. Funkhouser moved that appropriate space be allowed in the minutes of this Association where the names of those whose lives have been sacrificed shall be placed. Seconded and carried.

Dr. J. F. Owens, St. Joseph, presented the following:

To the President and House of Delegates of the Missouri State Medical Association:

The following resolution was adopted at the regular meeting of the Buchanan County Medical Society, held Wednesday evening, May 1, 1918:

Resolved, That this Society unanimously request the President and the House of Delegates of the Missouri State Medical Association to appoint Dr. C. R. Woodson to act as Councilor during the absence of Dr. O. C. Gebhart, the present Councilor who is in France with the American Soldiers.

(Signed) W. F. GOETZE, Secretary.

Dr. H. S. Forgrave requested that his appointment be withdrawn and the wishes of Buchanan County Medical Society to appoint Dr. C. R. Woodson as acting councilor be complied with. The president announced that fact and Dr. Woodson was appointed acting councilor.

The Secretary read the report for the Committee on Scientific Work. (See page 270.)

On motion by Dr. Hawkins, duly seconded and carried, the report was adopted.

Dr. R. M. Funkhouser, Chairman, presented the report of the Council on Health and Public Instruction, at the conclusion of which he moved that the House of Delegates indorse the Owen-Dyer bill in connection with the increase in rank of the officers of the Medical Reserve Corps. Seconded and carried.

Dr. Hawkins moved the report be adopted.

Dr. Hamel moved the report of the Committee be adopted, omitting that portion where the Committee is requested to contribute \$25, which will have to go to the Council for disposition. Seconded and carried.

Dr. L. C. Boisliniere stated: Referring to the indorsement of the Chairman of the Committee in regard to the Owen-Dyer bill, this bill has the approval of the President of the United States. I think we should do more than merely indorse that bill. It is going to take a pretty hard medical pull to get that bill before Congress. I move you that the Secretary of the Association be instructed to memorialize all the members of Congress from the State of Missouri and that each Secretary of the county societies be requested to memorialize the congressmen from his district. It is going to take united action.

Dr. Goodwin: It occurs to me that the occasion is so important that I suggest the Chairman of the Council on Health and Public Instruction, together with two other members to be appointed by the Chair, be appointed to draw up such a memorial and present it to the House for adoption at the afternoon session.

Dr. Woodson: I would suggest that the physicians throughout the state, regardless of politics, address personal letters to the Senators and Members of the House of Representatives, urging their support of this measure.

Dr. Hamel seconded the motion as presented by Dr. Goodwin.

Dr. Boisliniere withdrew his original motion.

Dr. Goodwin's motion carried.

Dr. Joseph Grindon moved that this body recommend to the Judicial Council the appropriation of the sum of \$25 to aid the work of the Children's Code Commission. The matter of course is for the Judicial Council to act upon, but I do not believe it would be out of place for us to express as a body our views in the matter and to recommend to the Council that

that action be taken. Nothing is more important than that which affects the welfare of the children of this state. I think not only should we give them that small financial aid if our treasury can afford it but furthermore to express our interest in their work and our approval of what they are doing. Dr. Woodson seconded the motion. After discussion Dr. Grindon amended his motion as follows:

It is moved that this body recommend to the favorable consideration of the Council a contribution to the Children's Code Commission. Seconded by Dr. Woodson and carried.

Dr. R. M. Funkhouser stated that it was not known at this time what the Workmen's Compensation Bill would contain, but that it was intended to present to the legislature the best compensation bill under the circumstances that can be prepared, and moved that this Association approve the principle of the Workmen's Compensation Bill. Seconded and carried.

Dr. Clark announced for Mr. Speer, who has charge of this magnificent new edifice, that if the members will set a time he will be glad to go through the building with them. He expresses his willingness to act as pilot and explain everything about the new capitol.

Dr. Clark announced the appointment of the following Committee on Nominations: Drs. H. C. Shuttee, Chairman, Titsworth, Holdenried, Forgrave, Downing, Welch, Anthony, Mitchell, Murphy and Gillham.

Dr. R. M. Funkhouser read the report of the special Committee on Medical Preparedness as follows:

The Committee has urged all county societies to follow the suggestions contained in the resolution of loyalty adopted at the 1917 session, which suggested that the members remaining at home should refund a certain percentage of fees collected from patients of members who have entered the service. Twenty-one counties have responded favorably. Madison county has adopted the method of paying to the family of each of its members in the service \$75 per month instead of refunding a portion of the fees. Jackson county has created a fund known as the Comfort Fund from which they will assist the families of members in the service.

Discussion by Drs. Elsworth S. Smith, Hamel, Shuttee, Matthews, Chandler, Woodson, Funkhouser, Hetherlin and Redman.

Dr. R. M. Funkhouser moved that each individual county society take care of its members who are called to the colors and keep them in good standing during their active service.

Dr. Hetherlin asked if that meant that each county society should pay the state assessment of its members in the Medical Reserve Corps and keep them in good standing during the period of the war?

The Chair said that Dr. Hetherlin's understanding of the motion was correct.

The motion carried.

The Secretary read the report of the Publication Committee. (See page 271.)

Dr. N. P. Wood, Independence, read the report of the Committee on Revision of Constitution and By-Laws. (See page 271.)

Dr. Hetherlin moved the report be accepted. Seconded.

Discussion by Drs. Hamel, Funkhouser, Woodson, Elsworth S. Smith, O. B. Hall, Cannon, Matthews, W. A. Clark, Baumgarten and McComas.

The roll was called and the vote resulted in 23 yeas and 24 nos, and the motion declared lost.

Mr. H. P. Allee read the Treasurer's Report.

The report was received and referred to the Judicial Council.

IN COMMEMORATION OF MEMBERS WHO
HAVE DIED IN THE SERVICE OF
OUR COUNTRY IN THE
WAR WITH GERMANY

The House of Delegates ordered that a page be set aside in the minutes, and that there be inscribed thereon the names of our members who have given their lives in the war with Germany. At this time the following members have paid the supreme sacrifice:

Lieut. William T. Fitzsimmons of Kansas City, killed September 4, 1917, when a German aeroplane dropped bombs on the Base Hospital of the Harvard Unit at Rouen, France, in which he was serving.

Lieut. Floyd S. Bates, M.R.C., Adrian, Mo., killed by lightning at Fort Riley, August 6, 1917.

Lieut. Frank V. Frazier, M.R.C., Altamont, Mo., died in a military hospital in France from bomb wounds, April 3, 1918.

Lieut. Charles R. Long, M.R.C., Sedalia, Mo., killed by a shell explosion while returning from duty in the front line in France, April 26, 1918.

COMMEMORATING THE FIRST MEETING
IN THE HOUSE OF REPRESENTATIVES
IN THE NEW
CAPITOL

By courtesy of the Board of Permanent Seat of Government of the State, the Missouri State Medical Association has the honor of being the first body to hold a meeting in the new House of Representatives since the chamber was occupied and dedicated by the General Assembly in 1917, at which time it was not furnished or finished. The House of Delegates ordered that a vote of thanks be extended to the members of the Board of Permanent Seat of Government for the use of the chamber, and for the special efforts they put forth to furnish it and have it in readiness for our annual meeting.

The Board of Permanent Seat of Government at this time is composed of the following:

The Governor, Hon. Frederick D. Gardner; the Secretary of State, Hon. John L. Sullivan; the Attorney General, Hon. Frank W. McAllister; the Auditor, Hon. George E. Hackmann; the Treasurer, Hon. George H. Middelkamp.

In commemoration of this occasion this page is dedicated.

Dr. Joseph Grindon, in reporting for the Committee on Vaccination, stated: As Chairman I wish to present a resolution. We have from time to time taken action in favor of vaccination but never have we adopted resolution favoring compulsory vaccination. I fear the time is not yet quite ripe, but I think it may be proper for us to express definitely our views on the subject and go on record as being in favor of the enactment of such legislation. I wish, therefore, to present the following:

The Missouri State Medical Association declares, That the world-wide consensus of medical opinion, enforced in the armies and navies of all civilized countries and by the laws of all but a few European nations governing their entire population, is that a successful vaccination with successful revaccination after 10 years confers absolute immunity against smallpox.

This Association further expresses the hope that the time is not far distant when legislation will confer upon the people of this state and nation the same protection as is now enforced and firmly established by the experience of mankind from the first, wherever known and introduced, by the majority of civilized peoples.

Dr. Hamel moved the report be adopted. Seconded and carried.

Dr. Hamel moved to adjourn until 3 o'clock p. m. Seconded and carried.

Afternoon Session

The House of Delegates was called to order at 3:30 p. m. by the Acting President, Dr. W. A. Clark.

Dr. R. M. Funkhouser, St. Louis: This is the first time, I believe, that this room has been occupied by a body of men as a meeting place and therefore our Association has the honor of christening the chamber of the House of Representatives as a meeting place. I think we should set aside a page in the minutes to commemorate the fact that this room was occupied for the first time since the completion of the new capitol as a place of meeting and that the Missouri State Medical Association had the honor of being the first organization to hold its meetings in this chamber.

Dr. Guy B. Mitchell, Branson: Unfortunately I must call your attention to the fact that this room was occupied by the Forty-Ninth General Assembly on the last day of its session and formally dedicated to the use of the legislature. The room was at that time far from completion, however, so that in reality this is the first time it has been occupied since it has been completed and furnished.

Dr. Funkhouser: I move then that a page be set apart in the minutes to commemorate the use of this chamber for the first time since it has been completed and furnished. Seconded and carried.

The Acting President, Dr. Clark, announced that the Board of Permanent Seat of Government had taken a very lively interest in preparing the chamber to be in readiness for our session and disregarded their own convenience in many ways. Not only was the chamber ready for our use but they have thrown open the beautiful lounging room and the private writing room for committee rooms of the Judicial Council and the County Secretaries' meetings. The Board of Permanent Seat of Government consists of the Governor, Frederick D. Gardner; the Secretary of State, John L. Sullivan; the Attorney General, Frank W. McAllister; the Auditor, George E. Hackmann; the Treasurer, George H. Middelkamp.

Dr. Funkhouser, St. Louis: I move that a vote of thanks be extended to the Board of Permanent Seat

of Government for the use of the House of Representatives and other rooms as a meeting place for the Sixty-First Annual Session of the Missouri State Medical Association and that we extend to the Board and to each member of it our grateful appreciation of their assiduous efforts to complete the furnishing and preparation of the room in time for our session. Seconded and carried.

Dr. L. C. Boisliniere, St. Louis, introduced a resolution as follows:

WHEREAS, The President of the United States has given his unqualified endorsement to the Owen-Dyer bill; and

WHEREAS, The provisions of that bill simply accord elemental justice to that arm of the service whose sacrifices and patriotism are equal to any other: be it

Resolved, That the Missouri State Medical Association heartily endorse the Owen-Dyer bill.

Resolved, That the Secretary of the Missouri State Medical Association be instructed to inform the two Senators and every member of Congress from the state of Missouri of the above endorsement.

Resolved, That the President and Secretary of each component society be requested to memorialize the two Senators and the member of Congress representing their particular district to the same effect, and furthermore, that they be requested to secure the cooperation of as many prominent and influential citizens in their respective districts in urging the passage of this bill.

Resolved, That each and every member of the Missouri State Medical Association be requested to use to the utmost his personal influence with the members of Congress to favorably consider this most vital legislation.

Resolved, That a copy of these resolutions be promptly transmitted to the various Presidents and Secretaries of each component society, urging immediate action as vital to the successful enactment of this necessary legislation.

On motion the resolution was adopted.

Dr. H. C. Shuttee, Chairman of the Committee on Nominations, read the report of the committee as follows:

Your Nominating Committee presents herewith the following nominations for office to be filled at this session of the House of Delegates:

Vice Presidents: J. D. Brummall, Salisbury; J. C. Matthews, Springfield; T. G. Hetherlin, Louisiana; S. P. Child, Kansas City; John Isbell, Washington.

Councilors: Second District, C. R. Woodson, St. Joseph; Ninth District, A. R. McComas, Sturgeon; Twenty-Fourth District, Frank Hyde, Eminence; Twenty-Seventh District, J. C. B. Davis, Willow Springs. No one being present from the Sixth, Eighteenth and Twenty-First Districts, your committee has left those positions vacant.

Delegates to the American Medical Association: Franklin E. Murphy, Kansas City; W. J. Ferguson, Sedalia; A. R. McComas, Sturgeon.

Member and Chairman of the Council on Health and Public Instruction, R. M. Funkhouser, St. Louis, term, 3 years.

Defense Committee: C. E. Hyndman, St. Louis, Chairman; Rudolph S. Vitt, St. Louis; Paul Y. Tupper, St. Louis.

Cancer Committee: Willard Bartlett, St. Louis, Chairman; Frank J. Hall, Kansas City; Ralph L. Thompson, St. Louis.

On motion the report of the Nominating Committee was adopted.

The Acting President declared that the next order of business would be the election of president for the ensuing year and appointed Drs. Bedford, Titsworth and Hamel to act as tellers.

Dr. O. H. Hall moved the nominations be made from the floor. Seconded and carried.

Dr. C. R. Woodson, St. Joseph: I have in mind an active worker in this Association for a number of years; distinguished, upright and honorable, one of the original 16 councilors. He hails from the County of Cass, and his name is Dr. M. P. Overholser of Harrisonville. I believe he will make a model president, a faithful officer and just and fair in all his actions. Unless there is someone that we could find better, and I don't believe we can, I desire to place in nomination Dr. Overholser of Cass County.

Dr. Hamel: I move the rules be suspended and that the Secretary be instructed to cast the ballot for Dr. Overholser. Seconded and carried.

Dr. Goodwin cast the ballot for Dr. Overholser for President.

Dr. Overholser: I appreciate very deeply indeed this honor which you have conferred upon me. I have heard not a whisper of whom you had in mind for President. This expression of your good will and confidence has inspired me with renewed ambition in the interests of the welfare of the medical organization of the State of Missouri. I feel deeply honored and believe such a recognition is more than enough to swell the heart of any loyal medical man with pride. I also realize that medical honor means medical service and I am here to pledge to you my earnest efforts, doing what I can for the advancement of the medical organization of our state. We are proud of what our Association has accomplished in the past in the way of state medicine and we realize that during the coming year we will be largely crippled by the absence of a number of men from the state. I hope with your help, in spite of the difficulties we have to encounter, that we may make this the banner year of the organization of our state. Again I thank you very kindly.

The next order of business is the selection of a place of meeting for next year's Association.

Dr. Funkhouser moved that Jefferson City be chosen as the next place of meeting.

Dr. H. J. Clark: I am from Clay County, where we have met before. We have good facilities for getting in and out, a place where we can hold all the meetings under the same roof and where accommodations are altogether admirable. I wish to invite the next meeting of the Missouri State Medical Association to Excelsior Springs. Seconded.

A standing vote was taken which resulted in favor of Excelsior Springs as the next place of meeting.

Dr. A. R. McComas, when called upon for the report of the Judicial Council, stated: I believe there is nothing specific to report except that we took up the recommendations of the Council on Health and Public Instruction and instructed the secretary to notify the councilors and the county secretaries throughout the state regarding the adoption of the recommendations of that committee. We further recommend a donation of \$25 to the Children's Code Commission and that \$1,000 be transferred to the sinking fund.

It was moved and seconded that the report be adopted. Carried.

Dr. Funkhouser: I believe this is the morning that an offer was made for showing us through this building. I move that we ask Mr. Speer to pilot us through now. Seconded and carried.

On motion seconded and carried the H. of D. adjourned *sine die*.

MINUTES OF THE JUDICIAL COUNCIL

Lounging Room, House of Representatives—

Monday, May 6, 1918

The Judicial Council was called to order at 1:30 p. m. by the chairman, Dr. A. R. McComas, Sturgeon.

The Secretary called the roll to which sixteen members responded as follows:

- 1st District.....E. L. Crowson, Pickering
- 2nd District.....C. R. Woodson, St. Joseph
- 9th District.....A. R. McComas, Sturgeon
- 10th District.....D. A. Barnhart, Huntsville
- 11th District.....G. W. Hawkins, Salisbury
- 12th District.....Spence Redman, Platte City
- 13th District.....Franklin E. Murphy, Kansas City
- 14th District.....C. T. Ryland, Lexington
- 15th District.....M. P. Overholser, Harrisonville
- 17th District.....W. J. Ferguson, Sedalia
- 19th District.....S. V. Bedford, Jefferson City
- 20th District.....A. H. Hamel, St. Louis
- 22nd District.....G. S. Cannon, Fornfelt
- 23rd District.....L. E. Cooper, Cooter
- 24th District.....Wm. Spaulding, Poplar Bluff
- 27th District.....H. C. Shuttee, West Plains

The minutes of the last annual meeting, Springfield, May 14 and 15, 1917, were read and approved.

The chair appointed the following Auditing Committee to examine and report on the books of the secretary and the treasurer: D. A. Barnhart, G. S. Cannon and Spence Redman.

The report of the Council on Health and Public Instruction was considered as follows:

Second section, regarding the cooperation of the Committee with the Children's Bureau of the Department of Labor at Washington. Dr. Hamel moved that the Secretary be instructed to write a letter to each of the Secretaries of County Societies requesting their cooperation with the Children's Bureau. Seconded and carried.

Third section, regarding the request of the Woman's Committee of the Council of National Defense, Missouri Division, in establishing a course of first aid in every county, it was moved and seconded that the Council approve their request and that a notice of this action be included in the letter the Secretary was previously instructed to write the County Secretaries. Carried.

It was moved and seconded that the cooperation of the Societies with the Children's Code Commission be solicited and embodied in the letter previously instructed to be written by the Secretary. Carried.

Dr. Hamel suggested that we could probably afford from a financial point of view to extend the donation of \$25.00 as they request, and moved that the Council make the donation of \$25.00 to the Children's Code Commission. Seconded and carried.

Dr. Hamel moved that the Council indorse the movement to pass the Owen-Dyer bill. Seconded by Dr. Ferguson and carried.

Dr. Hamel stated that it might be well to have an expression as to what financial aid should be given the commission on the Workmen's Compensation Bill. He said it seemed the Executive Committee should be relieved of the burden of making that appropriation, and the Council should express itself along that line.

Dr. Ferguson moved that the question of the amount of money be left to the judgment of the Executive

Committee when the time arrives for making the appropriation. Seconded by Dr. Cannon and carried.

The Secretary's report contained no recommendations, but instanced two actions vitally affecting the work of the Association; that in regard to a County Society electing to its membership a recent arrival in its community without investigation. When the state assessment of the newly elected doctor reached the office of headquarters the Secretary on referring to the records found he had been guilty of unbecoming conduct. The Executive Committee met soon afterward and instructed the Secretary to return the state assessment to the County Society.

The other circumstance was a case where a former member of a County Medical Society had applied for license in another state by reciprocity. This doctor after severing his connection with the organization entered the ranks of the newspaper advertising doctors. The Secretary sent a copy of the advertisement to the examining board making inquiry of the status of this physician and received word that his application for a license would be held up because that state would not license advertising doctors.

Dr. Hamel moved the action of the Secretary be approved and special commendation be given the Secretary for the painstaking manner in which he had followed up the records of these individuals. Seconded by Dr. Ferguson and carried.

Dr. Ferguson moved that the Secretary write a letter to all our members in the Service expressing the appreciation of our Association for their work. Seconded and carried.

On motion of Dr. G. S. Cannon, the Executive Committee's report, referred by the House of Delegates, was adopted as a whole including the recommendation that \$1,000 be added to the Sinking Fund.

Dr. Goodwin stated that again the question had been put to him about the propriety of field men soliciting members for the American Medical Association and the State Association.

Dr. Hamel moved that the matter be taken up by the Society of Medical Secretaries. Seconded and carried.

The Secretary informed the Council of the appeal from the decision of the Jackson County Medical Society in the matter of charges against Dr. B. Clark Hyde of Kansas City. Dr. Hyde appeared with his counsel and the appeal was heard after which the Council went into executive session.

Meeting of May 7, 1918

The Council reconvened at 2 p. m.

The two new Councilors, Dr. Frank Hyde, of Eminence, and Dr. J. C. B. Davis, of Willow Springs, were present.

Dr. Ferguson nominated Dr. McComas for reelection as Chairman of the Council for the ensuing year.

On motion the nominations were closed and Dr. McComas was unanimously elected Chairman of the Council.

Dr. Cannon nominated Dr. Goodwin for Secretary of the Council.

On motion the nominations were closed and Dr. Goodwin was reelected Secretary of the Council.

Dr. Hawkins nominated Dr. J. Franklin Welch for Treasurer of the Association.

On motion the nominations were closed and Dr. Welch was elected Treasurer.

Dr. Ferguson moved that the present Executive Committee be continued. Seconded and carried.

Dr. Cannon moved that Dr. Goodwin be reelected Secretary-Editor of the Association. Seconded and carried.

On motion adjourned.

MINUTES OF THE SCIENTIFIC MEETING

House of Representatives, Tuesday, May 7, 1918

The meeting was called to order at 9:15 a. m. by Dr. W. A. Clark, Acting President.

The president not being present, the manuscript of his address was submitted and ordered read by title and published in the proceedings.

Dr. E. Lee Dorsett, St. Louis, read a paper entitled "Sterility Due to Retrodisplacement of the Uterus; the Non-Operative and Operative Treatment." This paper was discussed by Drs. George C. Mosher, Kansas City; Frank J. Hall, Kansas City; Frank Hinchey, St. Louis; T. F. Lockwood, Butler; N. I. Stebbins, Clinton; J. F. Chandler, Oregon; discussion by Dr. Dorsett.

Dr. Frank Hinchey, St. Louis, read a paper on "Vaginal Drainage in Pelvic Cases." This paper was discussed by Dr. R. M. Funkhouser of St. Louis.

At this time Hon. Frederick D. Gardner, Governor of the state, made an Address of Welcome. Dr. John R. Hall, moved a vote of thanks to the Governor for his address. Seconded and carried by rising vote.

After a ten minute recess and singing "America" the scientific program was again taken up.

Dr. George C. Mosher, Kansas City, read a paper entitled "(1) The Passing of the Curette—Conservative Treatment of Abortion." This paper was discussed by Drs. W. C. Gayler, St. Louis (whose discussion was read by Dr. C. F. Sherwin); Frank Hinchey, St. Louis; J. F. Chandler, Oregon, and the discussion closed by Dr. Mosher.

On motion adjourned until one o'clock.

Tuesday Afternoon

The meeting was called to order at 1:20 by Dr. Clark.

Dr. F. T. Van Eman, Kansas City, read a paper entitled "Can We Disregard the Calendar in Setting a Date for Labor?" This paper was discussed by Dr. E. D. Twyman, Independence.

Dr. E. D. Twyman, Independence, read a paper on "Surgical Aspects of Abdominal vs. Pelvic Delivery." Discussed by Drs. H. E. Pearse, Kansas City, and George C. Mosher, Kansas City.

Dr. E. J. Schisler, St. Louis, read a paper entitled "Multiple Transfusion with Splenectomy in Pernicious Anemia, with a Study of a Case." This paper was discussed by Drs. R. B. H. Gradwohl, St. Louis; G. Canby Robinson, St. Louis, and discussion closed by Dr. Schisler.

Dr. C. F. Sherwin, St. Louis, read a paper on "The Hodgen Splint in Treatment of Fractures of the Femur."

Dr. F. C. Nifong, Columbia, read a paper on "The Hodgen Extension Suspension Splint; Its Use Exemplified in Both Civil and War Practice." These two papers were discussed by Drs. R. M. Schaffler, Kansas City; Francis Reder, St. Louis, and discussion closed by Drs. Sherwin and Nifong.

The 342 Field Artillery Band, Camp Funston, gave a short musical program at this time.

Capt. Calvin Cooper, Kansas City Aviation Unit, announced that, owing to the fact that the express company would not accept for shipment the Bány chair necessary for the tests they could not be given.

Dr. S. P. Child, Kansas City, read a paper on "Pulmonary Tuberculosis, Its Diagnosis and Prognosis." Discussed by Drs. G. Canby Robinson, St. Louis; H. M. Clark, Platte City; L. C. Boisliniere, St. Louis; H. S. Major, Fulton; T. Guy Hetherlin, Louisiana; O. H. McCandless, Kansas City, and discussion closed by Dr. Child.

Dr. R. B. H. Gradwohl, St. Louis, read a paper entitled "What the Laboratory Can Do and Cannot Do in the Diagnosis of Tuberculosis." This paper was discussed by Drs. J. J. Singer, St. Louis; Francis Reder, St. Louis; H. M. Clark, Platte City; D. F. Luckey, Jefferson City; L. C. Boisliniere, St. Louis, and by Dr. Gradwohl in closing.

On motion adjourned until Wednesday morning.

HOUSE OF REPRESENTATIVES

Wednesday, May 8, 1918

The meeting was called to order at 9:15 a. m.

Moved by Dr. C. R. Woodson, St. Joseph, that the newly elected President, Dr. Milton P. Overholser, be installed and call the meeting to order, there being no vice president present. Motion seconded and carried.

Dr. U. S. Short, St. Louis, read a paper entitled "Head Pain from Rhinological Point of View."

Moved by Dr. C. R. Woodson, St. Joseph, that all papers be limited to twenty minutes, and that all discussion of papers be omitted. Motion seconded and carried.

At this point in the program the president introduced Major Franklin Martin, Chairman General Medical Board, Council of National Defense, who delivered an address.

Dr. A. E. Horwitz, St. Louis, read a paper on "Chronic Backache from an Orthopedic Standpoint; Causation and Treatment."

Dr. R. M. Schaffler, Kansas City, read a paper on "Painful Feet."

Dr. Willard Bartlett, St. Louis, read a paper entitled "The Operative Indications and After Treatment in Goiter Surgery."

Dr. Francis Reder, St. Louis, read a paper entitled "Remarks on Angiomata, with Slides."

Dr. R. L. Thompson, St. Louis, read a paper entitled "Illustrative Lesions of Syphilis as Found in Routine Autopsies."

Dr. H. G. Mudd, St. Louis, made a statement in regard to the Owen-Dyer bill, asking each member to write or wire his representative and senator in Congress to work for the passage of this bill.

Dr. T. G. Orr, Kansas City, read a paper on "Myositis Ossificans Traumatica."

Moved by Dr. E. J. Goodwin that papers on the program which were not read be ordered read by title and the authors asked to submit them for publication in the JOURNAL. Motion seconded and carried.

Dr. E. J. Goodwin moved a vote of thanks to acting-president Clark. Motion seconded and carried.

On motion adjourned to meet in Excelsior Springs in 1919.

MINUTES OF THE TENTH ANNUAL MEETING OF MISSOURI SOCIETY OF MEDICAL SECRETARIES

Lounging Room, House of Representatives, Jefferson City, May 7, 1918

The tenth annual meeting of the Missouri Society of Medical Secretaries was called to order by the President, Dr. Spence Redman, of Platte City, at 1:30 p. m.

The Secretary, Dr. J. Q. Cope, of Lexington, called the roll, to which twenty secretaries answered present as follows:

- Bates County.....Dr. J. S. Newlon, Butler
- Chariton County.....Dr. G. W. Hawkins, Salisbury
- Clay County.....Dr. J. J. Gaines, Excelsior Springs
- Clinton County.....Dr. R. W. Rea, Plattsburg

- Henry County.....Dr. F. M. Douglass, Clinton
- Holt County.....Dr. J. F. Chandler, Oregon
- Howell County....Dr. J. C. B. Davis, Willow Springs
- Johnson County.....Dr. O. B. Hall, Warrensburg
- Lafayette County.....Dr. C. T. Ryland, Lexington
- Livingston County....Dr. J. C. Shelton, Chillicothe
- Moniteau County.....Dr. J. P. Burke, Jr., California
- Pemiscot County.....Dr. L. E. Cooper, Cooter
- Platte County.....Dr. S. L. Durham, Dearborn
- Pulaski County.....Dr. E. A. Oliver, Richland
- Ralls County.....Dr. T. J. Downing, New London
- Randolph County.....Dr. F. L. McCormick, Moberly
- Saline County.....Dr. F. W. Tuttle, Mt. Leonard
- St. Clair County.....Dr. E. C. Peelor, Lowry City
- St. Francis County....Dr. A. L. Evans, Bonne Terre
- Vernon County.....Dr. J. T. Hornback, Nevada

Dr. J. S. Newlon, Butler, Secretary Bates County Medical Society, read a paper entitled "Unity for a Successful Society" which brought forth a most liberal and beneficial discussion. The following doctors participated in the discussion: J. J. Gaines, J. F. Chandler, F. W. Tuttle, O. B. Hall, J. C. Shelton, S. L. Durham, Geo. S. Dowell, R. W. Rea, F. M. Douglass, David S. Long and E. J. Goodwin; Dr. Newlon, Closing.

The subject for general discussion, "Have You a County Fee Bill; if Not, Why Not? Have Your Fees Been Raised to Correspond to Other Advances?" proved a most enlightening one. While many of the Secretaries reported a raise in fees justified by advances in other lines, other Secretaries reported the condition of affairs in this respect almost startling. The subject was discussed by the following: E. C. Peelor, F. M. Douglass, J. F. Chandler, J. S. Newlon, J. C. Shelton, S. L. Durham, Geo. S. Dowell, H. E. Pearse, J. J. Gaines, R. W. Rea, E. E. Brunner and F. L. McCormick.

"Why Should Not Every County Have at Least One Hospital?" was the second topic for general discussion. It was clearly pointed out that every county should have at least one well equipped hospital, including the permanent employment of a laboratory expert, the hospital to be open to any and all doctors in the county. The subject was discussed by the following: N. M. Wetzel, G. W. Hawkins, R. W. Rea, H. E. Pearse and F. M. Douglass.

Under the order of unfinished business, the Secretary, Dr. J. Q. Cope, announced that his instructions received at the Springfield session to have printed a supply of Constitution and By-Laws for the Secretaries Association, had not as yet been carried out. In looking over the old books and a few copies of the old by-laws he thought there should be some changes made before a new supply was printed.

Dr. O. B. Hall moved that the President appoint a committee on Revision of Constitution and By-Laws, to go over the old constitution and suggest changes to be presented for adoption at the next annual meeting of the Association. Seconded and carried.

The President appointed the following committee on Revision of Constitution and By-Laws: O. B. Hall, Chairman, F. W. Tuttle and J. S. Newlon.

The next order of business was the election of officers for the ensuing year.

Dr. J. S. Newlon nominated Dr. J. T. Hornback, of Nevada, for president.

Dr. S. L. Durham nominated Dr. J. J. Gaines, of Excelsior Springs, for president. The vote was taken by ballot and Dr. Gaines was elected.

Dr. R. W. Rea nominated Dr. J. F. Hornback for first vice president.

Dr. Hall moved the nominations be closed and that Dr. Hornback be made the first vice president by

acclamation. Seconded and carried. The Secretary cast the vote of the Society for Dr. Hornback for first vice president.

Dr. F. W. Tuttle nominated Dr. R. W. Rea for second vice president. Dr. Shelton seconded the nomination and moved that Dr. Ray be elected by acclamation. Carried. The Secretary cast the vote of the Society for Dr. R. W. Rea for second vice president.

Dr. J. Q. Cope nominated Dr. J. S. Newlon, of Butler, for secretary. Dr. Rea moved the nominations be closed and that the secretary be instructed to cast the ballot for Dr. Newlon for secretary for the ensuing year. Carried. Dr. Cope cast the vote of the Society for Dr. Newlon for secretary.

Dr. J. J. Gaines was escorted to the president's chair, which position he accepted in his usual good grace, expressing his deep appreciation of the honor so unexpectedly passed to him and pledging his most earnest efforts toward the advancement of Missouri's Society of Medical Secretaries.

Dr. Gaines appointed the following Executive Committee: S. L. Durham, O. B. Hall, and J. F. Chandler, the President and Secretary Ex-Officio.

On motion the meeting adjourned.

REPORT OF THE SECRETARY-EDITOR, 1917-1918

That membership in our Association is a necessity to all right thinking physicians is becoming annually more apparent to the profession in general and to the public. The portals of entry therefore should be jealously guarded but without doing an injustice to any worthy physician. Without taking time to emphasize the personal benefits of membership, such as defense, subscription to THE JOURNAL and privilege of Fellowship in the American Medical Association, I will call attention to an important feature that has national scope: In the past any physician could move from one state to another if he fulfilled the meager requirements of the state to which he moved, but now few of the states permit unrestricted immigration of physicians. Most of the states require that applicants for a license by reciprocity shall be members of their county and state medical associations. Two occurrences during the year emphasize this point. The first was an inquiry from the examining board of another state concerning the standing of an applicant; I replied that he had severed his connection with our Association and had since entered the ranks of the advertising doctor by publishing a display advertisement in the newspapers. One of the rules of that board is that no doctor who has ever advertised shall receive a license to practice. Through the Association of Medical Examining Boards this information will be conveyed to every medical examining board in the country.

In another instance a county society elected to membership a physician recently moved into the county who is a member of an organization of fee splitters and who was rejected by the county society where he had previously lived for many years. I also found he had been held by a coroner's jury in connection with the death of a woman from a criminal abortion. We notified the county society of the facts, and with the approval of the Executive Committee his state assessment was returned to the component society.

The call for physicians in the world war has placed a severe drain on our membership but it is very gratifying to report that many of those in the service have paid their dues as usual or the county societies of which they are members have taken care of their dues for them. There are fifteen county societies which have followed this course and a number of other societies are awaiting the action of this

House concerning their duty toward their members in active service.

Surgeon-General Gorgas has made a new call for more doctors for the Army. He wants 5,000 as soon as possible and has appealed to the American Medical Association and the state and county societies to assist him in filling his call. Missouri's proportion will be about 300. The War Board of the American Medical Association called all state secretaries to a meeting at Chicago on April 30 and appealed to the state associations through the secretaries to assist in bringing before the members the urgent necessity of supplying this need of the Army. It would be fitting for the House of Delegates to order that a letter be sent to every county society requesting them to cooperate to the fullest extent with the War Board of the American Medical Association and with the Surgeon-General of the Army in this matter.

The regular work of the Secretary's office has been considerably increased because of the war conditions but we have managed to meet the emergency and have been grateful for the opportunity to do our bit.

Four of our members as far as our information goes at present, have paid the supreme sacrifice in this great war—Dr. W. T. Fitzsimmons of Kansas City was killed when a German airplane bombed the hospital where he was serving, and Dr. F. V. Frazier of Altamont, Daviess County, and Dr. Charles R. Long of Sedalia were killed in action, Dr. Floyd S. Bates of Adrian, killed by lightning at Ft. Riley, Aug. 6, 1917. Dr. J. F. Hardesty of St. Louis was reported missing, but was later found to be a prisoner. Dr. L. M. Edens of Cabool, Texas County, has been reported missing since April 12.

Total membership on April 20, 1917.....	3,137
New members since that date.....	203
Members reinstated.....	21
	3,361
Resigned	10
Transferred to other states.....	46
Dropped for nonpayment of dues.....	27
Expelled	2
Deceased	32
	— 117

Total membership April 20, 1918.....3,244

Respectfully submitted,
(Signed) E. J. GOODWIN, Secretary-Editor.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

It has not been easy to prepare a program for this meeting due to the fact that very many of the best men are in the government service. Many others, having offered their services did not care to start a paper while awaiting the call. Last year we were compelled to refuse a place on the program to many aspirants, particularly St. Louis men. This year we refused very few.

In spite of these difficulties the result promises to be good. The usual proportion of twelve papers from St. Louis, ten from Kansas City and fourteen from the rest of the state, has been insisted upon. The gynecologists and obstetricians seem to be taking a large part of our time, but these are important subjects and have a practical bearing on the everyday life of most of our members.

We call particular attention to the military program of Monday evening which will probably be the most interesting event of the meeting.

Respectfully submitted.

E. J. GOODWIN, Chairman.
R. E. CASTELAW.
W. C. GAYLER.

REPORT OF THE PUBLICATION COMMITTEE

1917-1918

From June, 1917, to May, 1918, twelve issues of the JOURNAL have been printed with a total of 930 pages, and eighty-five illustrations, an average of seven illustrations to the issue.

The total number of journals printed is 44,400 at a cost as follows:

Printing	\$3,830.87
Postage	380.41
Freight and hauling.....	266.00
	\$4,477.28

The total receipts from advertising..... \$4,746.30

Gain \$ 269.52

In addition to the sum collected we have outstanding accounts amounting to \$607.10, most of which will be collected.

It is gratifying to note that the members are sending papers to the JOURNAL, that reports of County Medical Societies and other matters pertaining to the activities of the organization are being forwarded regularly for publication.

REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BY-LAWS

Your committee begs to report that in a careful review of each chapter, article and section, we found nothing in the judgment of the committee that needs revision other than the resolution offered at the last annual meeting, namely: Strike out the words, "who is not in attendance at that annual session" occurring in the fifth and sixth lines of Article VIII, Sec. 3, so that the section shall read:

Sec. 3. The president, vice presidents and councilors shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of councilor, and no person shall be elected to any office who has not been a member of the Association for the previous two years.

The committee indorses the change.

E. F. ROBERTSON.
O. B. HALL.
N. P. WOOD, Chairman.

REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

The committee has been active in advancing legislation in the interests of physicians pending in the Congress, although there has been nothing to do in the state legislature because that body was not in session this year. Letters have been written to all congressmen urging their support of the Owen-Dyer Bill providing for adequate increase in rank of members in the Medical Reserve Corps. Replies were received from the following and excerpts from their letters were published in the April issue of the JOURNAL: Senators James A. Reed, William J. Stone; Congressmen William P. Borland, William L. Igoe, J. E. Meeker, T. L. Rubey, J. J. Russell, Champ Clark, J. W. Alexander and P. D. Decker.

Letters were also written to the congressmen urging them to support the bills to abrogate the patent on salvarsan and a copy of the resolution adopted by the House of Delegates in 1917 was sent to each con-

gressman. As you know, Congress has given authority to American firms to manufacture salvarsan.

The committee has cooperated with the Children's Bureau of the Department of Labor at Washington to conserve the health of children and especially to encourage the interest of our members in "Children's Year" which was inaugurated April 6, 1918, and will continue to April 6, 1919. It is the purpose of the Children's Bureau to save the lives of 100,000 babies during this period by educating mothers and the laymen in general in child welfare work.

The Woman's Committee on the Council of National Defense, Missouri Division, has asked our cooperation in establishing courses of instruction in first aid in every county and the committee has indorsed the request of the Woman's Committee to have the members of our county societies give the lectures for these courses. The movement is under the direction of the Red Cross.

The committee is cooperating with the Children's Code Commission in the preparation of bills to be introduced in the next legislature affecting the public health. The Children's Code Commission has requested our Association to contribute \$25 toward the work of the commission which operates on voluntary contributions.

The upheaval in chiropractic and optometry circles following the adjournment of the last legislature will be remembered by all.

Universal military training was indorsed by the Executive Committee and letters were sent to the county societies calling their attention to the Chamberlain bill which provides for universal military training.
R. M. FUNKHOUSER, Chairman.

REPORT OF THE COMMITTEE ON MEDICAL PREPAREDNESS

The committee has urged all county societies to follow the suggestions contained in the resolution of loyalty adopted at the 1917 session, which suggested that the members remaining at home should refund a certain percentage of fees collected from patients of members who have entered the service. Twenty-one counties have responded favorably. Madison county has adopted the method of paying to the family of each of its members in the service \$75 per month instead of refunding a portion of the fees. Jackson county has created a fund known as the Comfort Fund from which they will assist the families of members in the service.

R. M. FUNKHOUSER, Chairman.

NORTH MISSOURI MEDICAL SOCIETY

The North Missouri Medical Society held a most interesting and profitable meeting in the commercial club rooms at Moberly, June 17, 1918. There were about 125 physicians present, being a representation from almost every one of the forty-two counties north of the Missouri River.

We had a good and instructive scientific program, after which we listened to a most brilliant and profound patriotic address by the Rev. C. V. Lannius of Macon, Mo. We were then entertained by Major Luedde with a lecture and authentic moving pictures of war actions in France. Major Luedde also explained to the members the need of volunteers for the Medical Reserve Corps and the plans and methods suggested for securing them so that each county would do its part with as little disturbance of medical needs of the civilian population as possible, as well as an equitable adjustment of the medical profession, and if any physician shows the white feather or proves to be a slacker he should be held up before

his community in contempt. The various representatives heartily indorsed the plan. There were thirteen who forthwith took the examination. As usual, the physicians may be depended on to do their part and do it nobly.

The following officers were elected for the ensuing year: president, Dr. J. A. Furnish, Shelbina; first vice president, Dr. J. E. Thornton, Columbia; second vice president, Dr. G. G. Bragg, Huntsville; treasurer, Dr. Robert Haley, Brookfield; corresponding and recording secretary, Dr. J. D. Brunnall, Salisbury.

Salisbury, Mo., was selected as the next place of meeting. J. D. BRUMMALL, M.D., Secretary.

ST. LOUIS MEDICAL SOCIETY

Meeting of April 20

The meeting was called to order at 8:50 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read, corrected and approved.

Dr. Trice presented a remarkable case of ringworm, with lantern slide demonstration.

The scientific program consisted of the following: "The Application and Use of the Hodgen Splint Exemplified in Both Civil and War Practice," by Dr. Frank G. Nifong of Columbia, Mo. (by invitation). Discussion by Drs. R. M. Funkhouser, Francis Reder, C. C. Morris, Ellis Fischel, C. H. Shutt; Dr. Nifong closing.

Dr. Shutt addressed the Society on the method of applying the Hodgen splint. He stated that during his term of service at the City Hospital very few of the interns knew how to apply the Hodgen splint and he suggested that the Program Committee set aside an evening for public demonstration of applying the Hodgen splint.

Dr. Talbott reported for the Committee on Missouri Building at Camp Funston, Kansas.

Dr. Koetter moved that on account of the lateness of the evening Dr. Cooke's paper be made a special order of business for the meeting of April 27. Seconded by Dr. Shutt. Carried.

The secretary read communications from the St. Louis Convention and Publicity Bureau. Dr. Shutt moved that they be referred to the Council. Seconded. Carried.

Dr. Shutt read an article in the *Christian Science Monitor* in which it was stated that Harvey D. Gibson, general manager of the American Red Cross, and a member of the War Council, had authorized the statement that no more Red Cross money is to be used for vivisection experimentation.

Dr. Funkhouser moved that the president, Dr. Smith, interview Dr. Opie, who has just returned from France in regard to the above. Seconded. Carried.

Dr. Funkhouser moved that a rising vote of thanks be given Dr. Nifong. Seconded. Carried.

Attendance 90.

Meeting of April 27, 1918

The meeting was called to order at 8:50 p. m., by the second vice president, Dr. Rudolph Buhman. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Proteose Intoxication and Injury of Body Proteins," by Dr. J. V. Cooke.

Discussion by Dr. Charles H. Neilson; Dr. Cooke closing.

"An Improved Operative Technique in Surgery of the Thyroid Gland," by Dr. Willard Bartlett.

Discussion by Dr. Francis Reder; Dr. Bartlett closing.

"Some Observations on Diseases of the Esophagus, with Lantern Slide Illustrations," by Dr. Charles H. Neilson.

Discussion by Drs. O. A. Ambrose, E. Lee Meyers, E. H. Kessler; Dr. Neilson closing.

The secretary read a communication from the Child Welfare Committee of the Council of National Defense.

Dr. Koetter moved that this be referred to the Washington University and the St. Louis University Medical Schools.

Dr. Hamel amended the motion and moved that a committee of three pediatricians be appointed to confer with the schools. Seconded. Carried.

Dr. Buhman appointed Drs. T. C. Hempelmann, A. S. Bleyer and John Zahorsky as the committee.

Dr. Koetter called the attention of the Society to the death of Dr. Chapman. The president appointed honorary pallbearers for the funeral to be held on Sunday.

Attendance 80.

Meeting of May 4, 1918

The meeting was called to order at 8:50 p. m., by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

Dr. Samuel E. Peden reported a case of a young girl, 19 years of age, without a uterus.

Discussion by Dr. Henrietta A. S. Borck.

The scientific program consisted of the following: "University Hospital Organization," by Dr. L. H. Burlingham.

"Municipal Hospital Organization," by Dr. Cleveland H. Shutt.

In the absence of Dr. Shutt his paper was read by Dr. Rolla Henry.

"Private and Affiliated Hospital Organization," by Dr. Louis Rassieuer.

Discussion by Drs. Ernest Sachs, J. Curtis Lyter, C. C. Morris, Henry Jacobson, and G. Canby Robinson; Drs. Burlingham, Henry and Rassieuer closing.

Dr. Jacobson moved that a petition be sent to the city authorities asking that a teacher be appointed at the City Hospital at the earliest time possible to teach convalescent children. Seconded by Dr. Borck. Carried.

The secretary read an article which appeared in the *Bulletin* on the Missouri Building at Camp Funston, Kansas, and the president urged all members to subscribe to the fund.

The secretary read a postcard from Dr. R. E. Schlueter stating that he had received a majority and regretting that he was unable to attend the State Association meeting.

Dr. E. Lee Meyers moved that the heartiest congratulations of the Society be extended Dr. Schlueter with regrets that he was unable to attend the meeting of the State Association. Seconded by Dr. Holdenried. Carried.

The report of the special committee on interviewing the Chamber of Commerce about the Owen-Dyer Bill was read by Dr. Jacobson, and ordered filed.

Dr. Smith read a telegram from Dr. Franklin Martin who is to address the Society at a public meeting on Tuesday evening, May 7, 1918.

Attendance 80.

Special Meeting of May 7, 1918

The meeting was called to order at 9 p. m., by vice president, Dr. Phelps G. Hurford.

A very interesting picture was shown describing the last offensive drive of the Germans in which the wonderful defensive part of the Canadian troops was displayed.

Dr. Luedde introduced Captain McDermott, of the British Canadian Military Service, who gave an

interesting account of his experiences in Russia and Roumania during the last two months.

Dr. Hurlford appointed Dr. John Young Brown to introduce the guest of the evening, Dr. Franklin Martin, Chairman General Medical Board, Council of National Defense. Dr. Martin gave an earnest appeal for physicians to enter the military service as the army is asking for 300 more physicians by July 1, 1918.

Dr. Shutt spoke about the Owen-Dyer Bill and urged the members to get in touch with the senators and representatives and secure their help in passing the bill.

Dr. Koetter asked unanimous consent for suspension of the by-laws and moved that Dr. Franklin Martin be elected an honorary member of the St. Louis Medical Society by a rising vote. Seconded and carried.

Attendance 400.

Meeting of May, 11, 1918

The meeting was called to order at 8:50 p. m., by the president, Dr. Elsworth S. Smith.

Dr. Luedde presented the guest of the evening, Colonel Williamson, of the General Staff, Washington, D. C., who gave an interesting talk on medical officers training camps, the attacks of chlorine gas and the combating of such attacks.

Dr. Luedde presented some wonderful pictures showing the great fight and the tenacity displayed by the Canadian troops in saving Callais and also the wonderful work that can be done in reconstructing disabled soldiers.

Dr. Gradwohl moved that the thanks of the Society be extended to Colonel Williamson for his interesting address and that the secretary be instructed to write him. Also that a vote of thanks be given Major Luedde for the interesting pictures that he had displayed. Seconded by Dr. Engelbach. Carried.

The secretary read a communication from the Auxiliary Medical Defense Committee extending thanks to the Society for its prompt cooperation in arranging the very successful meeting for Dr. Franklin Martin on short notice, May 7.

The secretary read another communication from the Auxiliary Medical Defense Committee on the resolution affecting members who have not become citizens of the United States.

Dr. Smith called attention to the fact that the By-Laws did not contain any reference to members not being citizens of the United States.

Dr. Boisliniere moved that the Medical Society approve the action of the Defense Committee. Seconded and carried.

Dr. Gradwohl moved that it be reported to the Council. Seconded and carried.

Dr. Koetter reported for Dr. Soper on the Third Liberty Loan.

Dr. Boisliniere moved that the report be adopted and thanks extended to the members of the Society for their subscriptions, and that the committee be congratulated on their good work. Seconded and carried.

Dr. Gardwohl amended the motion and moved that the names of the subscribers be published in the Bulletin, also those subscribing through other means and those members that did not subscribe. Seconded and carried.

Dr. Smith spoke on the Missouri Building at Camp Funston, and urged that the full quota be given by the members.

Dr. Engelbach suggested that the members present raise the necessary deficit which was \$172, and that he would start the list with \$20.

The following offered to donate the balance needed: Drs. Engelbach, Gradwohl, Neville, Schisler, Senter Gettys, Elsworth Smith, Koetter and Talbott.

Attendance eighty.

Meeting of May 18, 1918

The meeting was called to order at 8:50 p. m. by the president, Dr. Elsworth S. Smith.

Dr. Bransford Lewis presented an interesting case of a man past 70 years of age operated on for diverticulum of the bladder.

Dr. E. Lee Myers presented a case of Bezold's mastoiditis draining into the left palate.

Discussion by Dr. Koetter.

The scientific program consisted of the following: "Some Observations on the Pathology and Treatment of Summer Diarrhea of Infants," by Dr. John Zahorsky.

Discussion by Dr. J. Louis Swarts; Dr. Zahorsky closing.

"An X-Ray Study of Gastric Motility," by Dr. Walter Mills.

Discussion by Dr. E. H. Kessler; Dr. Mills closing.

Dr. Smith read a notice of a patriotic clinical conference to be held in St. Louis, June 5, 6 and 7. The headquarters for the registration of visiting physicians to be at the society building, on June 5, physicians to meet at the society building and be escorted to Jefferson Barracks where Lieut.-Col. C. E. Freeman, M. C., has provided for general inspection of post drills, demonstration of the methods of examining recruits, lectures on sanitation and infectious diseases and social entertainment. Clinical programs and lectures have been arranged at Washington University and St. Louis University Medical Schools and at various city institutions for the following days.

Dr. Koetter moved that all members who have machines which they can place at the disposal of the committee to carry visiting physicians to the barracks, communicate with the secretary stating the seating capacity of their machines.

Dr. Hamel offered an amendment that it be published in the Bulletin. Seconded and carried.

Dr. Schisler reported for Dr. Edward Richter, chairman of the Public Welfare Committee of the city board of aldermen, that there would be a public hearing on May 28, at 4 p. m. at the headquarters of the board of aldermen on the bill making it obligatory for physicians to report venereal diseases.

Dr. Schisler moved that this be published in the Bulletin and referred to the Committee on Health and Public Instruction. Carried.

Attendance eighty.

ARTHUR GUNDLACH, Secretary.

ADAIR COUNTY MEDICAL SOCIETY

At the January meeting of the Adair County Medical Society, the president discussed the importance of the members presenting more clinical cases as a means of making our monthly meetings more interesting and profitable. Dr. Martin read a paper which concerned the management of persistent occipito-posterior positions, which was fully discussed by all members present.

At the February meeting Dr. Dodson presented a patient with endocarditis and valvular lesion following an attack of acute rheumatism.

Dr. B. B. Parrish read an interesting and instructive paper on the technic and significance of blood pressure, with a history of the procedure. This paper provoked a lively discussion.

At the June meeting the society took favorable action on resolutions passed by the House of Delegates at the Jefferson City meeting of the State Association relative to paying the annual dues of members who are called to the colors while said members are in active service; also relative to the Owen-Dyer Bill. The secretary was directed to notify our congressman and the Missouri senators of our action.

Dr. W. L. Shank made application for membership and it was referred to the board of censors.

Dr. E. C. Grim was elected to membership, his application having been reported on favorably by the censors. Dr. Grim is now a captain in the Medical Reserve Corps.

Subject for the evening was actinomycosis, and Dr. Derfler reported a case, giving the history, physical signs, course and treatment. The patient recovered. The subject was discussed and other cases reported.
J. M. MARTIN, M.D., Secretary.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held in the assembly rooms of the Public Library Building, Wednesday evening, May 15. There were thirty-nine members present, Dr. L. J. Dandurant in the chair. The minutes of the previous meeting were read and approved.

The application of Dr. J. T. Stamey for membership in our society received its first reading and was referred to the board of censors for their investigation.

The special committee appointed to draw up a set of resolutions regarding the death of Dr. Herbert Lee, made their report through Dr. P. I. Leonard, chairman, who read the resolutions which were ordered spread on the minutes and the secretary was instructed to send a copy of these resolution to the widow.

The program of the evening consisted of a symposium on transfusion of the blood, and papers were read by the following members: Drs. H. S. Forgrave, J. I. Byrne, and A. B. McGlothian.

The subject was discussed by the following members: Drs. Jacob Geiger, Owens, Conrad, Potter, Dandurant, Farber, Doyle, and Beard; Dr. Byrne closing.

Meeting of June 5

The regular meeting of the Buchanan County Medical Society was held at their rooms in St. Joseph, Wednesday evening, June 5, 1918, with forty-one members present; the president, Dr. Daniel Morton in the chair. The minutes of the previous meeting were read and approved.

The applications of Drs. Bailey and Stamey were returned to the censors with instructions to have their report ready at the next regular meeting.

Application of Dr. W. T. Elam for membership in our society received its first reading.

In accordance with the amendment to our by-laws, the following standing committee on economics was appointed: Drs. P. I. Leonard, C. R. Woodson, J. F. Owens.

On motion of Dr. A. L. Gray, seconded by Dr. Holley, this committee was instructed to find out whether this society could legally establish a fee bill and if so, to prepare and have the bill ready for discussion at our next regular meeting.

Dr. C. A. Good made public a call from the Surgeon-General's Office for 25,000 nurses for Army and Navy service.

Dr. Charles Geiger donated to the society an electric motor for operating the picture machine.

The meeting closed with a film production, subject, "Gastrostomy," by Dr. Lilliantal.

W. F. GOETZE, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society has held two meetings since my last report. The April 29 meeting at Liberty found everybody in that "burg" either busy or gone fishing! The few that were present, however, made up in spirit what they lacked in numbers. No better meeting has been held anywhere.

Case reports were the order of the day and many new ideas were developed.

The meeting of May 29 was held at Excelsior Springs. As this was a "War Meeting" everybody was present. Dr. H. J. Clark, delegate, gave a terse report of the recent state meeting, which was received with enthusiasm.

Dr. Jabez N. Jackson of Kansas City responded to a unanimous invitation to address this meeting and in the hour that he spoke the interest was profound. Dr. Jackson is an enthusiast on winning the war and a vote of thanks was tendered him. The spirit of the Clay County Medical Society is aroused to the extent that every man will volunteer if necessary in support of Uncle Sam.

J. J. GAINES, M.D., Secretary.

DALLAS COUNTY MEDICAL SOCIETY

The Dallas County Medical Society at its regular meeting agreed to take care of its members who are in the service. We had a very pleasant meeting at Urbana on June 11 with six out of the seven members present.

FRANK A. HUDSON, Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in the Gasconade County Court House, Hermann, Thursday, April 25, 1918, afternoon and night session.

The following were present: Dr. Williams, Pacific; Dr. W. C. Miller, Labadie; Drs. J. O. Cooper and James Jett, Linn; Drs. F. H. Coughell, W. C. Wessel and E. L. Haffner, Hermann; Dr. John D. Seba, Bland; Major W. H. Luedde, M. R. C., U. S. Army, and Dr. Carroll Smith, St. Louis; Dr. A. Sophian, Kansas City.

Dr. Carroll Smith delivered a lecture on the surgical phase of empyema. His lecture was generously discussed by the doctors present.

Major Luedde was the next speaker. He explained that one fifth of the doctors of Gasconade County were expected to enlist in the Medical Reserve Corps, and that at the present time Gasconade County did not have anybody in that organization. He said that the government was listing all the doctors in the state, the list to include age, physical condition and number of dependents; that where there was only one doctor in the community, if he was needed there he would not be taken into the army service and thus inconvenience the civil population of that community. Major Luedde appointed the following to give him the above desired information: Drs. E. L. Haffner, Howard Workman, John S. Enloe, J. J. Ferrell and John D. Seba.

Dr. A. Sophian of Kansas City spoke on the various pathological conditions of the mediastinum and exhibited many roentgen-ray pictures to illustrate.

At the night session Dr. Sophian spoke of pathology and treatment of cerebrospinal meningitis. He told that the infection was carried through the nose and throat and into the spinal column, and how the spinal puncture should be made and what procedure should be employed to rescue the patient.

The rain prevented a large attendance which was very much regretted by all, especially since but very few physicians are able to treat spinal meningitis scientifically.

Dr. W. C. Wessel of Hermann handed in his application as a member. The committee, Drs. Cooper, Jett and Seba, reported favorably on the application and Dr. W. C. Wessel was accepted as a member.

It was voted that the Society meet the next time in the Maries County Court House the last Thursday in June, provided that this date is acceptable to the member living in Maries County.

JOHN D. SEBA, M.D., Secretary.

HENRY COUNTY MEDICAL SOCIETY

The Henry County Medical Society met in Windsor on Wednesday, June 19, and was called to order by Dr. Thomas A. Blackmore at 1:30 p. m. Present: Drs. T. A. Blackmore, C. W. Head, R. J. Jennings, M. E. Bradley, J. H. Walton and H. M. Wall, Windsor; Drs. A. J. McNees, R. D. Haire and F. M. Douglass, Clinton; Drs. J. R. Rogers, C. T. Taylor and U. G. Streibey, Brownington. The minutes of the previous meeting read and approved.

Dr. Frank C. Neff of Kansas City, Mo., lectured on the examination of children. He brought with him many new instruments and chemical reagents, gave explicit instruction how to use them, and the many advantages to be gained. He explained his manner and method of examination, what to look for and why, and told of the errors that could be avoided by the careful attention to the parts examined and the tests used. He gave a very interesting and useful table of the manner of feeding the new-born, what is best to use and the reasons why; spoke of mild therapy and good results. Dr. Walton, as a question, related a case of a boy he saw in consultation—the tests used and what he found. Dr. Neff explained the significance of the tests and what he thought was the cause. Dr. Walton said the boy died on the fourth day. All present gave a close attention to the lecture and commended the information gained by coming and listening to the instruction given.

Dr. Jennings said, he, as a member of the County Committee, had attended the Medical Reserve meeting in Kansas City, what he had learned there, and why it was necessary for every doctor in Henry County of the age of service to offer himself now. That all in Windsor had done so and knew their status.

Dr. Douglass as secretary of the committee, gave a history of the meetings and work of the committee, what had been done to get a knowledge of the availability of each doctor in the county, and the reports he had made to the State and National Councils of Defense, and what could be expected in the near future; he read the instructions to the committee and applicants and the answers prepared for their information, and claimed that the moving out of the county of Dr. G. W. Berry from Montrose and Dr. J. P. Elder from Blairstown, had reduced our available supply, but not our quota. Discussions of this business occupied the balance of the time. The three doctors from Brownington said they would go and take their examinations and know where they stood.

F. W. DOUGLASS, M.D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY

One of the most interesting meetings ever held by the Johnson County Medical Society was that of May 14, 1918. A goodly number was present, and much interest was shown in organized medicine and in the progress of medical science generally.

Our society adopted a proposed fee bill regulating country mileage at 75 cents per mile, plus the fee for a town or city visit, for day work, 50 per cent. extra for night work, and \$15, plus mileage, as the minimum for obstetrical work.

Dr. L. J. Schofield presented a paper on "Pituitrin in Obstetrics and Gynecology."

Dr. J. W. Bolton read a paper on "Some Neglected Fields in Medicine."

Both papers were interesting and elicited much valuable discussion.

Those of us who attended the State Meeting are back on the old job, enthusiastic to do better work than ever before.

The society voted to hold its next meeting in the city of Harrisonville, jointly with the Cass County Medical Society, in honor of our newly elected State President, Dr. M. P. Overholser.

O. B. HALL, M.D., Secretary.

PLATTE COUNTY MEDICAL SOCIETY

The Platte County Medical Society met in regular session in Platte City, June 5, with Dr. A. S. Herndon, president, in the chair. The following members were present: Drs. Herndon, Redman, Clark, Murray, Schultz, Chastain, Patterson and Durham.

Dr. S. L. Durham read a paper on "Pernicious Anemia" with report of a case. Dr. Spence Redman opened the discussion which was participated in by Drs. Patterson, Schultz, Clark and Durham.

The society then enjoyed a real treat—a paper on "Gastric Hemorrhage," by Dr. H. M. Clark. The doctor went into the anatomy of the stomach, with special emphasis on the blood supply. He dealt at length on the etiology of this symptom, giving the various causes of bleeding from the stomach, to prove that the larger percentage of gastric hemorrhages, especially the profuse hemorrhages, were due to gastric ulcers. The discussion on this paper was opened by Dr. H. H. Patterson and taken part in by Drs. Redman and Clark.

There being no further business the society adjourned to meet again July 3.

S. L. DURHAM, M.D., Secretary.

POLK COUNTY MEDICAL SOCIETY

Polk County Medical Society met in Bolivar April 2, 1918, with the following members present: A. J. Stufflebaum, president; C. N. Hahn, vice president; J. T. Roberts, secretary-treasurer; R. D. Dill, R. C. Nevins, W. D. Drake.

Dr. Drake moved that dues of C. H. Brown and R. Lee Russell and any other members of our Society who join the Medical Reserve Corps, be remitted by the Society. Motion carried.

Motion made and carried that Article VIII, Section 3, be changed so that the House of Delegates can elect members to office even though such members may not be present at the session.

Moved and seconded that the Owen-Dyer bill be indorsed by this Society and that the secretary be instructed to write our United States Senators and Representatives asking their support. Motion carried.

The following officers were elected for the following year: C. N. Hahn, president; R. D. Dill, vice president; R. C. Nevins, secretary-treasurer; W. D. Drake, delegate, alternate to be selected by delegate; J. T. Roberts, censor for three years.

Society adjourned to meet at Flemington, second Tuesday in June.

R. C. NEVINS, M.D., Secretary.

PUTNAM COUNTY MEDICAL SOCIETY

The Putnam County Medical Society met in Unionville in the office of Dr. Vores on Tuesday, March 22, at 1:30 p. m., the president, Dr. Ida Nulton, being in the chair. Four members were present. The minutes of the previous meeting were read and the accounts of the previous year approved.

There having been no meeting since last fall the following were elected officers for 1918: President, Dr. J. H. Holman, Unionville; secretary, Dr. C. H. Carryer, Unionville.

It was moved by Dr. Vores and seconded by Dr. Gray that this Society pay the state dues of Dr. B. E. Cobb of Lemons who is now on active service in France, and the motion was carried unanimously.

The secretary announced that all members were now paid up for this year.

The meeting then adjourned, the time and place of meeting being left to the call of the new president.

C. P. VORES, M.D., Secretary.

RANDOLPH COUNTY MEDICAL SOCIETY

The Randolph County Medical Society met in regular session at the Commercial Club Rooms in Moberly June 5, 1918, at 8 p. m. with the president, Dr. Dutton, in the chair. The minutes of the previous meeting read and approved. Members present were: Drs. Clapp, Shrader, Cuppiadge, Dutton, Mitchell, Dixon, Bazan and McCormick, Moberly; Epperly, Barnhart and Bragg, Huntsville; Winn, Higbee; Allen, Cairo; Woods, Clark and Davis, Jacksonville. Visitor, Dr. Mangus, Moberly.

Dr. Barnhart, our alternate delegate to the State Association meeting, made a report of the meeting that was very interesting.

Dr. Cuppiadge made a motion, which was adopted, that the secretary be requested to notify Dr. Franklin H. Martin of the coming meeting of the North Missouri Society and extend to him an invitation to be with us. Dr. Cuppiadge also made a motion that the secretary notify Senators Reed and Wilfrey, also Congressman Rucker, that the Randolph County Medical Society stood solidly behind the Owen-Dyer Bill. Seconded and carried.

Dr. Clapp made a motion that the Society pay the dues of all of its members that had gone to the service, both State and American Medical Association, also to refund to all those that had already paid. The motion was adopted. A general discussion of the plans and arrangements for the North Missouri meeting was discussed and plans decided on as the best way to have a general good meeting, which will be held in Moberly at the Commercial Club Rooms on Monday, June 17, 1918.

F. L. McCORMICK, M.D., Secretary.

REYNOLDS COUNTY MEDICAL SOCIETY

The Reynolds County Medical Society met in regular session at Centerville, May 3, 1918. The following members were present: Drs. J. H. Lamb, J. R. Pyrtle, Centerville; T. W. Chilton and J. A. Chilton, Ellington; C. C. Simmons, Bunker; A. F. Bugg, Corridon.

After being called to order by President Lamb, the society transacted the usual routine business and then proceeded to elect new officers. The following were elected: Drs. J. A. Chilton, Ellington, president; Dr. J. R. Pyrtle, Centerville, vice president; A. F. Bugg, Corridon, secretary-treasurer.

By motion of Dr. Simmons, the society voted to aid the Child Welfare Department in their work and to cooperate with the Red Cross societies of each community in this work.

The secretary was instructed to write the Red Cross Society for full instructions so as to proceed with this work.

The president appointed a committee to proceed with the work when full instructions are received.

The secretary was instructed to select subjects and designate two members to read papers at the next meeting.

Dr. J. R. Pyrtle was selected to prepare a paper on "Autogenous Vaccines, Their Preparation and Use"; Dr. T. W. Chilton, Ellington, "Therapeutics of Intestinal Infection with Treatment."

Clinical cases were next taken up, and Dr. Lamb presented a case of pyelonephritis. The patient, a boy of 3 years; duration of illness, two months.

After discussion by the society, it was decided to give symptomatic treatment until a full and complete examination could be had of the urinary secretions, both chemically and microscopically.

A. F. BUGG, M.D., Secretary.

SCOTLAND COUNTY MEDICAL SOCIETY

The Scotland County Medical Society met in the office of Dr. A. L. Davis, Tuesday, May 7, 1918, with Dr. Davis, president, in the chair. After reading the minutes of the last meeting the society elected the following officers for the year 1918: President, Dr. P. M. Baker, Memphis; vice president, Dr. J. A. Shacklet, Rutledge; secretary-treasurer, Dr. E. E. Parrish, Memphis; delegate to State Association, Dr. A. E. Platter, Memphis; alternate, Dr. P. M. Baker, Memphis.

Lieut. A. E. Platter of Camp McClellan, who was home on furlough, gave the society an interesting talk on the life and duties of a Medical Reserve Officer in the army which was enjoyed by the members. This is the first meeting we have had for some time and it seemed good to get the members together once more and talk over old times. I am sure those present went away fully convinced that they felt better by having come. I hope we will be able to have meetings more regular now that summer and good roads are here.

E. E. PARRISH, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society met in Sikeston, April 9, 1918, in Dr. P. M. Malcolm's office. The members present were Drs. L. O. Rodes, G. A. Sample and J. A. Cline. Other physicians of the county present were Drs. Malcolm, Kendell, Mayfield and Riley, all of Sikeston.

The president being absent and a vice president not having yet been elected, the meeting was called to order by Dr. Rodes in the chair. The minutes of the last meeting were read and, after some corrections, were approved.

Dr. J. W. Trisler's application for membership in the Society was voted on, and he was received as a member with dues paid for the year 1918.

Dr. P. M. Malcolm was reinstated to membership and dues paid for 1918, also dues for arrears were paid in full.

The offices of vice president and delegate not having yet been filled, election for filling said offices was called and Dr. J. W. Trisler of Morely was elected vice president and Dr. Malcolm of Sikeston was elected delegate.

In reply to a communication from the State Association secretary concerning the amendment introduced by Dr. C. B. Clapp of Moberly, it was decided to leave same to our delegate.

Concerning a communication from the State Secretary making inquiry as to how many of the Society had accepted commissions in the Medical Reserve Corps, it was agreed that the reply be given in these minutes, and furthermore that, through courtesy to the other physicians of Scott County who have accepted commissions in the Medical Reserve Corps, the minutes show their names also, thus:

Members of the Scott County Medical Society who have accepted commissions in the Medical Reserve Corps are as follows: W. O. Finney, Chaffee, and T. R. Frazier, Commerce.

Other physicians of Scott County who have accepted commissions in the Medical Reserve Corps, not members of the Society, are: H. S. Winters, Oran; T. V. Miller and G. W. Presnell, Sikeston, and A. L. Stepp, Vanduser.

As the members on the program for papers to be read at this meeting were unable to be present, there was no more business before the Society, so after a number of case reports which were fully discussed by those present, it was moved and carried to adjourn to meet in Chaffee at the next regular meeting which will be on the second Tuesday in July, 1918.

J. A. CLINE, M.D., Secretary.

ST. CLAIR COUNTY MEDICAL SOCIETY

The St. Clair County Medical Society met in Lowry City, May 15, with the following members present: From St. Clair County, Drs. Cline and Smith of Appleton City; Drs. SeEVERS and Bell of Osceola and Drs. Wright, Dice and Peelor of Lowry City. Invitations had been sent to the Henry County Members, and there were present Dr. Stebbins of Clinton; Drs. Head, Blackmore and Wall of Windsor, and Dr. Russell of Deepwater. Drs. Talbot and Rollins of Appleton City were visitors.

Dr. Ruth SeEVERS of Osceola made a very interesting talk on "How to Keep Children Well."

Dr. Leo Wright presented some original ideas on arteriosclerosis, and Dr. T. A. Blackmore, president of the Henry County Medical Society, read a paper on "Hypertension."

The society then adjourned to a restaurant, where refreshments were served.

EDWIN C. PEELOR, M.D., Secretary.

W. E. CLINE, M.D., President.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met at Hartville, on May 2, 1918, at 2 p. m., in the office of Dr. A. J. Farmer, with Dr. R. A. Ryan presiding.

The following members were present: Drs. Ames, Fuson, Ryan, Farmer and Norman; visitors, Dr. Wilson of Hartville and Dr. F. B. Fuson of Springfield.

Dr. F. B. Fuson presented a very instructive paper on "Blood Pressure," and Dr. Wilson read a very interesting paper on "Trachoma."

The society took the resolution from the table, which was presented at the last meeting, in regard to changing the time of the Mountain Grove and Mansfield meeting, by which the annual meeting will be held at Mansfield in November, and the February meeting at Mountain Grove. The resolution was read and unanimously adopted.

It was then voted that out of respect for our Douglas County members, the next regular meeting in August be held at Ava instead of at Norwood. Norwood cordially waived her right to the meeting and it was unanimously voted to have our next meeting at Ava, the first Thursday in August.

J. A. FUSON, M.D., Secretary.

THE TRUTH ABOUT MEDICINES**NEW AND NONOFFICIAL REMEDIES**

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

CHLORCOSANE.—A liquid, chlorinated paraffin, containing its chlorine in stable (non-active) combination. It is used as a solvent for dichloramine-T and is itself without therapeutic action.

CHLORCOSANE-CALCO.—A brand of chlorcosane containing from 31 to 35 per cent. of combined chlorine. The Calco Chemical Co., Bound Brook, N. J.

CHLORCOSANE-MONSANTO.—A brand of chlorcosane containing from 27 to 30 per cent. of combined chlorine. Monsanto Chemical Co., St. Louis, Mo., (*Jour. A. M. A.*, May 18, 1918, p. 1459).

PROPAGANDA FOR REFORM

MAYR'S WONDERFUL STOMACH REMEDY.—This is a "patent medicine" adaptation of the old "fake gallstone" trick, which consists of selling large doses of olive or other oil and a saline cathartic. The result of taking this combination is the passage of a number of soapy concretions which the victim is persuaded to believe are gallstones. In 1915 Mayr was convicted under the federal Food and Drug Act for making false and fraudulent claims for his "remedy." As the Food and Drug Act applies only to the packages of a preparation and not to store window displays and newspaper advertising, Mayr has revised the labels, etc., for his "patent medicine," but still makes misleading claims elsewhere (*Jour. A. M. A.*, May 11, 1918, p. 1393).

COTARNIN.—Cotarnin is an artificial alkaloid derived by oxidation from narcotin, by a process analogous to the derivation of hydrastinin from hydrastin (which again differs from narcotin only by an additional OCH_3 group). Cotarnin hydrochlorid is marketed as stypticin, and cotarnin phthalate as styptol. Cotarnin is used systemically mainly against uterine hemorrhage, especially in menstrual hemorrhage, endometritis and congestive conditions. It is ineffective against postpartum hemorrhage or bleeding from gross anatomic lesions, and probably also against hemorrhage in other internal organs. Local application of cotarnin in substance or concentrated solution has a direct vasoconstricting effect and is used in tooth extractions, epistaxis, etc. (*Jour. A. M. A.*, May 11, 1918, p. 1396).

SYPHILODOL.—According to the French Medicinal Company, New York, Syphilodol is a "synthetic chemical product of silver, arsenic and antimony," the effects of which are very similar to those of salvarsan and neosalvarsan, with the advantage that, in addition to being available in ampules for intramuscular or intravenous use, it is also furnished in the form of tablets for oral administration. The A. M. A. Chemical Laboratory reports that each Syphilodol tablet contained approximately $\frac{3}{4}$ grain yellow mercurous iodid with minute traces of arsenic, silver and antimony. The laboratory further reports that a Syphilodol ampule contained a liquid having the characteristics of water, in which the presence of less than 1/6000 grain of arsenic could be demonstrated. Shorn of its mystery, Syphilodol therefore is essentially the old, well-known "protoiodid of mercury" (*Jour. A. M. A.*, May 18, 1918, p. 1485).

PYOCYANEUS BACILLUS VACCINE.—When this vaccine was admitted to New and Nonofficial Remedies in 1910 it gave promise of having therapeutic value. Now the firms whose products are described in New and Nonofficial Remedies advise the Council on Pharmacy and Chemistry that they have ceased to make the vaccine because of lack of demand. Holding the lack of demand as evidence that the vaccine had proved without value, the Council directed its omission from New and Nonofficial Remedies (*Jour. A. M. A.*, May 18, 1918, p. 1496).

THE DR. CHASE COMPANY.—A fraud order prohibiting the use of the mails has been issued by the postoffice department against the Dr. Chase Company. This patent medicine concern sold three remedies—pills—which, before the Food and Drugs Act made lying on the label irksome if not expensive, were known, respectively, as "Dr. Chase's Blood and Nerve Food," "Dr. Chase's Kidney Food" and "Dr. Chase's Liver Food." Since the enactment of the Food and Drugs Act, however, the term "food" in the name of the nostrums has been changed to "tablets" for obvious reasons. In 1917 K. E. Hafer, the proprietor of

the Dr. Chase Company, was fined under the Food and Drugs Act for misbranding (*Jour. A. M. M.*, May 25, 1918, p. 1557).

CAPSULES OF BISMUTH RESORCINOL COMPOUND.—According to the label, each capsule of Bismuth Resorcinol Compound (Gross Drug Co., Inc., New York City) contains bismuth subgallate, 2 grs.; resorcinol, 1 gr.; betanaphthol, ½ gr., and creosote (beechwood), 1 m. The preparation was declared inadmissible to New and Nonofficial Remedies because unwarranted therapeutic claims were made for it; because the name is not descriptive of its composition, and because the combination of the stated drugs in fixed proportions is irrational (Reports Council Pharmacy and Chemistry, 1917, p. 139).

ELIXIR NOVO-HEXAMINE.—The A. M. A. Chemical Laboratory reports that Elixir Novo-Hexamine (Upsler Smith, St. Paul, Minn.) is not a "stable, palatable potent preparation of Novo-Hexamine, an acid compound of hexamethylenamine," as claimed, but a flavored and colored solution of sodium acid phosphate and hexamethylenamine in diluted glycerol. The Council on Pharmacy and Chemistry considered the report of the laboratory and the advertising claims, and declared Elixir Novo-Hexamine inadmissible to New and Nonofficial Remedies because its composition is secret; because the ill-advised use by the public is invited; because unwarranted therapeutic claims are made for it; because the name is misleading, and because it is irrational to prescribe hexamethylenamine and sodium acid phosphate in fixed proportions (Reports Council Pharmacy and Chemistry, 1917, p. 142).

FORMOSOL.—Sunshine's Formosol (The Formosol Chemical Co., Cleveland, Ohio) is claimed to contain 18 per cent. formaldehyd in a solution of soap. The preparation was refused recognition by the Council on Pharmacy and Chemistry because it was advertised indirectly to the public and because unwarranted therapeutic claims were made for it (Reports Council Pharmacy and Chemistry, 1917, p. 145).

KALAK WATER.—Kalak Water (The Kalak Water Co., Inc., New York) is a carbonated, artificial mineral water, said to contain in one million parts sodium carbonate, 4,049.0; sodium phosphate, 238.5; sodium chlorid, 806.3; calcium carbonate, 578.2; magnesium carbonate, 48.9, and potassium chlorid, 47.9. In view of the false and absurd claims made, the Council on Pharmacy and Chemistry declared Kalak Water inadmissible to New and Nonofficial Remedies (Reports Council Pharmacy and Chemistry, 1917, p. 148).

BOOK REVIEWS

THE MEDICAL CLINICS OF NORTH AMERICA, MARCH, 1918. Published by W. B. Saunders Company, Philadelphia and London.

This is the Chicago number of Medical Clinics and contains descriptions of numerous cases from fifteen clinics, comprising many conditions of great interest to the general practitioner. The book has a total number of 242 pages with numerous illustrations.

MEDICAL SERVICE AT THE FRONT. By Lieut.-Col. John McCombe, C. A. M. C., and Capt. A. F. Menzies, M. C., C. A. M. C. Illustrated. Publishers, Lea and Febiger, Philadelphia and New York, 1918. Price, \$1.25.

This little book gives a concise description of the duties of a medical officer in the Canadian Army, from the front line trenches to the casualty clearing station.

J. G. H.

A HANDBOOK ON ANTISEPTICS. By Henry Drysdale Dakin, D.Sc., F.I.G., F.R.S., and Edward Kellogg Dunham, M.D., Emeritus Professor of Pathology, University and Bellevue Hospital Medical College, Major, Medical Officers Reserve Corps, U. S. Army. New York: The Macmillan Company, 1917. Price, \$1.25.

While the authors of this little volume give brief mention of the more important generally recognized antiseptics, such mention is generally confined to comparative laboratory experiments showing their relative potency as compared with the newer antiseptics of the chlorine group. This latter group consisting of Dakin's hypochlorite solution, chloramine-T and di-chloramine-T, is discussed with considerable detail as to preparation, chemistry, bactericidal properties in vitro, and their clinical results in war wounds. Such other antiseptics as have been found useful in war surgery, hygiene and sanitation are also given due consideration. The chapter on the disinfection of water is especially commendable.

C. F. S.

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS. By George W. Norris, M.D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M.D., Assistant Professor of Medicine in the University of Pennsylvania, with a chapter on the Electrocardiograph in Heart Disease, by Edward B. Krumbhaar, Ph.D., M.D., Assistant Professor of Research Medicine in the University of Pennsylvania. Octavo of 782 pages with 413 illustrations. Philadelphia and London: W. B. Saunders Company, 1917. Cloth, \$7.00 net. Half Morocco, \$8.50 net.

The authors have given a very extensive and very scientific description of the physics of diagnostic findings, in addition to the usual data to be found in a work of this magnitude. But the most interesting feature of the work is the large number of excellent photographs of frozen sections from the cadaver showing the anatomic relations as in life. After a description of the general methods of examination of the chest, they take up the various diseases of the thoracic viscera, including the diaphragm, discussing the etiology, morbid anatomy, symptoms, physical signs and diagnosis.

An interpolated article on the electro-cardiograph by Dr. Edward B. Krumbhaar assists in making the treatise more complete.

The volume is hardly serviceable for the undergraduate but will be useful to any practitioner, while to the diagnostician it is an inspiration. R. T. S.

THE PRACTICE OF PEDIATRICS. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital. Second edition, revised and reset. Octavo of 913 pages, 136 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.50 net.

There is no shortage of books dealing with diseases of children, but in this field there has always been a shortage of books like this one, a statement that is probably truer of this particular department of medicine than of any other.

Among many good chapters the one on the transmissible diseases is particularly good because of its display of common sense, this being the sort of sense that is most uncommon in connection with the contagious diseases. Advice as to the feeding of children ill with typhoid fever and scarlet fever is of the character that should be more widely followed. The article on diphtheria is particularly complete, but one rather is surprised at the absence of any mention, either in condemnation or approval, of the use of the antitoxin injected into the vein or deep in the muscles,

which forms of injection are rapidly replacing the subcutaneous. And another subject of surprise is the statement that the author "cannot agree with those writers who describe urgent symptoms early in a case of typhoid." This seems common in the Mississippi valley, as does the very mild type on which the author lays very little stress.

Perusal of the chapter on diseases of the skin again demonstrates that that field should be left to the dermatologist, though this is noticeable more in the lack of detail than in misinformation.

A just criticism of the work is the failure to recognize dyspepsia, weight disturbance and intoxication as very definite clinical entities in etiology, course, and therapeutic indications, while the belief in the value of the nutrient enema stands out as being contrary to the opinion of most pediatricians. The subjection to two days of practical starvation of a marasmic infant seems rather hazardous; and in this connection we note the failure to take advantage of the high proteid milk which proves of value so often in marasmus.

Certain points of criticism, however, which may after all prove not to be well founded, cannot blind us to the fact that we have in this book a needed addition to pediatric literature. P. G. H.

DISEASES OF THE SKIN: THEIR PATHOLOGY AND TREATMENT. By Milton B. Hartzell, A.M., M.D., LL.D., Professor of Dermatology in the University of Pennsylvania. 51 Colored Plates and 242 Cuts in the Text. Published in Philadelphia and London by J. B. Lippincott Company. Price, \$7.

During the past forty years the science of dermatology has been indebted to the Philadelphia School for many valuable contributions. In addition to a vast amount of research work by various men, textbooks and monographs dealing with this branch of medicine have been contributed by Duhring, Stelwagon, Van Harlingen, Shoemaker, Schamberg, Knowles, and Bernstein, and now to this splendid galaxy another name must be added, that of Hartzell—an eminent dermatologist whose work has long been familiar to those of us who are interested in cutaneous medicine.

After a comprehensive and well illustrated chapter on the anatomy of the skin, and a brief discussion of the physiology, a score or more of pages are devoted to general symptomatology, etiology, and pathology, and a like amount of space to general diagnosis and treatment.

The classification employed is one along the lines first suggested by Hebra, modified to conform to our present more advanced knowledge of the various subjects under discussion.

The descriptions are clear, concise and to the point, and the dead timber commonly found in many of the larger books on diseases of the skin has been eliminated. The majority of the illustrations are from the author's own collection, and the reproductions in black and white are most admirable. In the reviewer's opinion, better photomicrographs have never before been published.

For a first edition, the book is remarkably free from typographical errors. The inclusion of tinea versicolor under the anomalies of pigmentation is an oversight which will of course be corrected in the next edition.

Only a few other suggestions as to betterment may be made. The majority of experienced dermatologists, and particularly dermatologists who have been trained in pathology, would distinguish more clearly between basal-celled and squamous-celled cancer of the skin. To employ an Americanism, there is as much difference (from the viewpoint of prognosis) between growths of these two types as there is between a jack-rabbit and a wild-cat, and it is the duty of the man who knows to emphasize this point

so strongly that the general practitioner cannot possibly overlook it. Many of the colored plates are poor, for all are of the same reddish, barn-paint hue. The pictures had much better been left in black and white for the originals undoubtedly were good or the author would not have selected them.

For the benefit of future dermatologists the essential differences between benign cystic epithelioma and syringocystadenoma might have been more distinctly outlined (the photomicrograph on p. 555 looks more like one of basal-celled cancer of the skin than of syringocystoma), but the point is controversial at best and from a practical standpoint of but little moment.

The volume is beautifully bound and the paper of excellent quality. The book will prove a useful addition as well as an ornament to any library.

R. L. S.

MILITARY SURGERY. By Dunlap Pearce Penhallow, S.B., M.D. (Harvard). Major, M. R. C., U. S. Army; Chief Surgeon, American Women's War Hospital, Paignton, England; Formerly Director of Unit, American Red Cross European Relief Expedition. With Introduction by Sir Alfred Keogh, K.C.B., Director-General Army Medical Service. Original drawings by the author. Second edition. Cloth. Pp. 555. Publishers, London, Henry Frowde, Oxford University Press. American Branch, 35 West Thirty-Second Street, New York. Price, \$5.00.

On the whole this volume is well arranged. The subjects are classified and subclassified so thoroughly that the author has been able to present an unusually large number of facts for a volume of this size. Its text is brief and lucid and on the whole the information that concerns general surgery is so in accord with standard surgical practice that little or nothing can be found to suggest criticism.

The chapters dealing with projectile varieties of wounds together with their complications and treatments are both instructive and interesting. Infection, which is perhaps the most common as well as the most important complication of wounds in military practice, has been adequately discussed. The excision and primary closure of wounds seem to have been very satisfactory in selected cases. Thorough drainage is given the prominence it deserves in the treatment of all forms of suppuration.

The use of antiseptics in the prevention and elimination of infection is favorably mentioned by the author. He speaks well of the Carrel method. This method recalls to us our early days which always included the routine measures to eliminate infection by the use of antiseptics. All were given a trial—from bromine water to salt solution—applied by irrigation or continuous immersion. Sharke's apparatus for permanent irrigation was very similar to the Carrel outfit. We read with interest the report of results obtained by the Carrel method. Our past experience, our conception of the pathology of inflammation, and the belief that it is not the surface infection, but the infection with the tissues that is of supreme consequence to the patient, together with the limited experience with Dakin solution and Carrel's method, have given us the vague impression that Carrel's method will be less popular in the future than it has been in the past.

The chapters dealing with wounds of special anatomical parts are complete and offer nothing that can be objected to. I shall only mention the treatment of joint wounds and a word regarding compound fractures. It is recommended in the treatment of extensive wounds in the large joint that after the parts have been thoroughly cleansed the wound in the synovial membrane should be closed; or, if this is impossible, the capsule of the joint should be sutured closing off the joint cavity by a layer of tissue from

the superficial wound. It has been observed that following this procedure many joints remain clean while the wound in the soft tissue suppurates. These joints do not remain clean if the joint is drained, for the infection finds its way along the drainage course from the superficial structures into the joint cavity. I have believed in this method and have made use of it for twenty years. It was published in detail in the *Philadelphia Medical Journal* of July 12, 1902. It occasionally happens that the same principle can be used to advantage in the treatment of compound fractures. If it is possible, a barrier of tissue should be placed between the superficial soft structure and the fractured surface, thereby preventing infection, which is almost certain to occur on the surface, from producing osteomyelitis.

The plating of bones in cases of infected compound fractures is mentioned favorably. I take it that the author does not recommend plating as a routine measure, but desired to remind us that in certain cases of compound fractures with sepsis a plate may be used to advantage.

J. G. S.

Among the State Journals

HOW OLD ARE PHYSICIANS?

During international strife, even more than in the piping times of peace, the physician and his service stand in a special class. In drafting the combatant forces the government has limited itself to men between the ages of 21 and 31 years. It accepts volunteers to a somewhat greater age. But for the physician the age limit is raised to 55 years. There are special reasons for this. One is of course that the number of physicians required for military service in time of war is greatly beyond the proportion of medical men to the civil population. Another is that, whereas a soldier may be made by six months' training, the average time required to prepare a physician for practice may conveniently be estimated as from five to seven years, according to whether or not we include the two preparatory years of college study. The third reason, partly bound up with the second, is that most physicians have not reached their greatest possibility for usefulness until they approach middle life.

In daily conversations with regard to service in the Medical Reserve Corps one frequently hears debated the bearing of the age of the individual upon his responsibility for army service. Some interest would therefore seem to attach to figures concerning the age of physicians. As a simple criterion probably applicable in the main to much wider areas, a statistical study was made of the ages of the 644 physicians of known age listed for the city of Denver in the American Medical Directory for 1916. Assuming that each physician's age is at the present moment exactly what it would be on his birthday in 1918, the following figures are arrived at: Only nine are under 30 years of age. Twenty-five are between 70 and 75 years. The average age of the 644 physicians is approximately 51 years. By decades, the largest number are between 50 and 60 years of age, namely, 206. The next largest number falls between 40 and 50 years, namely, 182; the next between 60 and 70, namely, 119, and the next between 30 and 40, namely, 103. It is interesting to reflect that the average is undoubtedly materially increased by the marked reduction in the number of students graduated from the medical colleges of this country in recent years, and also of course by the lengthened requirement for preliminary education which has itself been a factor in diminishing the number of medical graduates.—*Colorado Medicine*.

HAS A REST NOW AND THEN

Hospital Visitor—"Don't you find the day pass very slowly and wearisome?"

Wounded Soldier—"Not always. They don't let visitors in every day."—*London Tit-Bits*.

DELAWARE JOURNAL

At last, after months of conferences, debates and deliberations, we have decided to continue the publication of the *Delaware State Medical Journal*. You will note that this number, the first since September, 1917, is for the months of January, February and March. We have decided that a monthly journal is too inconsequential, since our State Society membership is so very small, and therefore this journal will be published henceforth as a quarterly. We propose to make each number as large (or a trifle larger) as three of our former monthly numbers. We hope to be able to fill each copy with material written by Delaware men, for Delaware men, and about Delaware men. We hope to make each number distinctly helpful to our members. We hope to have our original papers of such a quality that they will be abstracted and quoted in the other medical journals, a feat that will be practically unique in the history of this journal. It is not to be conceded for one minute that the experiences of the profession in Delaware are so commonplace that they do not deserve to be published; hence, we take this occasion to remind our readers that it is up to them to make this journal what it ought to be—the editor is merely a collaborator, a collector, and is not expected to write each month sufficient copy to fill a journal, even as small a one as this. We request that the papers read at the various monthly meetings of the county societies be forwarded to us for publication.—*Delaware State Medical Journal*.

THE MANAGEMENT OF DIFFICULT CASES OF BREAST FEEDING

Carpenter concludes an interesting article as follows: The vast majority of nursing infants who have colic, or vomiting, or diarrhea, are suffering from overfeeding. A vicious circle is started by the improperly trained baby crying to be picked up and carried. This is wrongly interpreted by the parents as hunger, and the baby is given the breast every time it cries, consequently being fed at short irregular intervals, with resulting indigestion and more crying, and so on and so on.

When the baby is gaining in weight, irrespective of vomiting or diarrhea or colic, the proper advice is not to wean the baby but to continue breast feeding.

If for any reason, such as the temporary illness of the mother, it is necessary to discontinue the nursing, a determined effort should be made as soon as the mother's condition permits, to reestablish breast feeding. The mother's opinion that she has no milk is not sufficient, the physician should examine the breasts and determine if a little fluid can be expressed from the nipples. The baby should be put to the breast five times a day at the regular feeding time before giving it any other food, as it will then be most hungry. When this effort to reestablish lactation is continued conscientiously, the large number of cases in which the result will be successful, even after a number of days of artificial feeding, is surprising. Whether or not results are being obtained can best be determined by the repeated use of the "test feed." Of course, supplementary feedings must be given until the milk is secreted in sufficient quantity, as determined by this test.—*The Pennsylvania Med. Jour.*

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ORIGINAL ARTICLES

A PLEA FOR THE RENAISSANCE OF THE HODGEN SPLINT*

F. G. NIFONG, M.D.
COLUMBIA, MO.

Some two years ago a learned and inspiring presidential address was delivered to this Association on the "Old Art and the New Science of Surgery." In it the fact was mentioned that both the science and the art of surgery were much indebted to some of our Western surgeons. That thought suggested the possible need for this paper. It seems at the present time appropriate that one of the most valuable surgical appliances resulting from our great Civil War should be more generally understood and used: I refer to the Hodgen splint.

Glancing at the history of the art of surgery, we marvel at the many procedures handed down to us empirically which accord perfectly with what is best in the modern science of surgery. We admire and wonder at the skill and acumen, the remarkable powers of observation and the clinical ability possessed by the old surgeons. Many old practices which were proven good by results are now rationally and scientifically explained, and we have the reasons for their being good. Others of these old practices have fallen, not exactly into disrepute, but into some thing like "innocuous desuetude," and we need a renaissance. They need to be restored.

The appliance about which I wish to speak to you is one not much used (because of lack of understanding), but one which is in accord with every scientific principle of the modern science of surgery. This is the Hodgen splint. It is an appliance which, if used more generally and understandingly, would give us much better

end results in fractures and especially fractures of the femur.

It will not be amiss to know something of the originator of this remarkable appliance, John T. Hodgen. He sprang from the soil, the good, rich, virgin soil of old Kentucky, the same which produced immortal Lincoln. The choicest fruit springs from the pure seedling implanted in the rich, virgin soil. (The multitudes of insect life do not destroy its beauty and whole-



Fig. 1.—Pad well the heel, tendo Achilles, and malleoli before applying Buck's extension.

someness as they do at a later period.) John T. Hodgen was born in Hodgenville, Ky., in 1826, a pioneer unhampered by too much civilization. He came of sterling stock, was uninfected by the vices of civilization, strengthened in mind and character by the struggles and adversities of pioneer life. For knowledge he had a passion. His parents came to Illinois, as did Lin-

* Read before the Western Surgical Association, Omaha, Dec., 1917.

coln's, and there he obtained his common school education. In Bethany, W. Va., he secured a college education, and from Missouri State University he received medical education, graduating in 1848. From that time on he made himself a diligent student, a forceful teacher, a most



Fig. 2.—Applying the adhesive plaster for Buck's extension. The block or spreader a little wider than the malleoli, the leg shaved. The adhesive may go to the fracture site or even above. Apply always to above the knee joint, when possible.

skillful surgeon, and one of the first citizens of St. Louis. He became a great teacher of anatomy, physiology, and surgery. First he taught in the old McDowel College, until it became a federal prison; then he went to the St. Louis Medical College. He was a teacher and author-



Fig. 3.—A light roller bandage over the adhesive or diagonally applied additional adhesive slips may be used.

ity on fractures and dislocations, and dean of this Medical College until his death in 1882. So numerous and varied were his activities and services during the strenuous times of the Civil War that they can not be recounted in this

sketch. Many honors came to him unsought. His was to serve with all his mind, his heart, his skill. And marvelous was his skill, because his trained hands were directed by a mind keen, alert and acquainted with all the art then known. His was a quick, incisive mind, a mind thoroughly acquainted with mechanics and the law of physics, and quick to apply them. He was a genius in the application of his knowledge; resourceful most wonderfully so. A woman with hair pins in her hair, a strangling baby, a bistoury, and Hodgen to quickly bend the pin and use the bistoury, and a life was saved.

Fame is mostly vapor or mere camouflage at best. Most monuments of antiquity are now destroyed. Medical fame is rarely more than an abstract name. Ten years ago a memorial service was held in St. Louis in honor of Dr. Hodgen, twenty-five years after his death. Evidently he was remembered worthily and lovingly by his surviving friends and disciples. It speaks well for his work and worth, for most of us are forgotten ere our bodies disintegrate. Good work and advancement in science should not be forgotten, though the author may be. Gurdon Buck made a great advance during the Civil War when he invented his extension. Nathan R. Smith did well with his suspension splint, but John T. Hodgen did more when he perfected his suspension extension splint.

It is exceedingly painful for one trained to properly apply the Hodgen splint in the old St. Louis City Hospital by Hodgen's nephew, the late Henry Mudd, to see various text books misprint Hodgen's name, and print pictures of the Hodgen splint nothing like what he devised. Recently a publisher showed me a new book on fractures and dislocations. A bare mention and a poor picture of the Hodgen splint damned the book. Another had it "Hodgkin's splint," merely mentioned in passing. It is an opportune time, I think, for a better understanding of what is the real Hodgen splint, and the basic scientific principles of its use. Numerous war pictures, displaying intricate and complicated devices to secure suspension and extension in the treatment of fractures of the long bones, might well have been simplified and therefore improved with the Hodgen appliance. When we examine the old texts, and some of the new, and note the various methods of treating fractures of the femur, we well might imagine we are reading an illustrated history of the Spanish Inquisition. From such instruments of torture

it is little wonder we have such deplorable end results in fractures of the femur. Sergeant Price Martin (*Surgery Gyn. and Obs.*, Dec., 1915) did a creditable work for the Mayo Clinic when he tabulated the end results of 242 cases of simple fracture of the femur from Philadelphia Hospitals. All were treated by simple Buck extensions.

All this shows that there is much to be desired both in treatment and results, especially for the aged. The percentage of cured, that is not crippled, is from 90 per cent. in the very youngest, rapidly decreasing to practically none over 60 years. From the ages of 60 to 80 years twenty-one lived, twenty-five died, and only one was really complete recovery. From 70 to 80 years seven lived and fifteen died. No complete functional recoveries.

Walter M. Brickner (*Amer. Jour. Surg.*, Jan. 1917) considers only three plans are admissible in fractures of the neck of the femur in the aged: Whitman's reduction and immobilization; open operation; no treatment. "No treatment" is well said, for no aged person will ever endure the other two procedures and live.

Estes (*Annals of Surgery*, July, 1916) estimates only 2 per cent. of his femur fractures had accurate apposition, and he now subjects 38 per cent. to open operation. Fractures of the neck are maintained in forty-five degree abduction, according to Whitman, and in extension and suspension, which is well.

The Hodgen splint is so simple and dependent on such basic mechanical principles, it seems strange that it should be so illy understood and often poorly applied; but that is a fact. I have never seen a Hodgen splint properly made by an instrument maker.

Make and apply the splint for each case. After you have seen your patient and made your diagnosis, put on your Buck's extension and get patient in the proper room and bed; measure from the perineum to 1½ inches below the heel; measure 4½ or 5 inches for the cross-bar under foot; measure, on the outside, from this point to the crest of the ilium; go to the

blacksmith and get about three-eighth-inch iron and bend at right angles, according to this measure; bend at the knee both arms of splint sufficient to make physiological flexion; place hooks midway between the perineum and knee, and midway between knee and end of splint, with

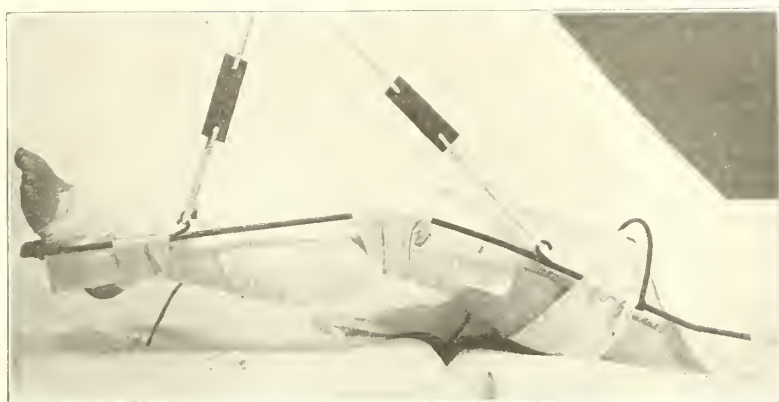


Fig. 4.—The pulley, suspension cords, and splint are arranged and let down on the limb. The extension cord is tied to the end of the splint. Three or four suspending slings are put under the leg and thigh. The limb is then elevated and extended. Adjustments are quickly and easily made by the tent blocks.

the outside hooks exactly opposite; make a stiff arch from the inner to the outer arm near the perineum, to hold the splint rigid and the arms apart; apply cords to the hooks, the longer to the upper hooks. These cords are hung in the loop of the third cord, which goes to a pulley, in the ceiling preferably, because the longer it is

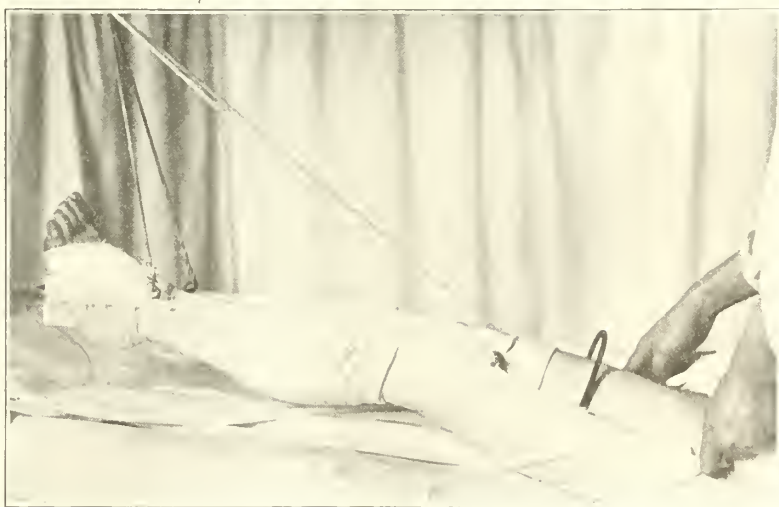


Fig. 5.—The suspending slings are applied from the heel to the hip. The internal splint bar reaches to the os pubis. The external reaches to the trochanter. The top of the limb should be about level with the splint. The thigh portion here is slung hardly low enough.

the more mobile the patient may be in bed. This cord is held by a tent-block to regulate its length.

The proper amount of counter-extension and abduction is regulated by the position of the bed.

Now let the splint come down over the limb and apply the Buck's extension cord to the

cross-arm of splint under the foot. Pin a few loops of bandage from the heel to the perineum; suspend the limb in proper position with the necessary amount of extension. Now apply, from the heel up, four-inch bandage strips, overlapping each time two inches, until the entire limb is resting comfortably in this ham-

appliance for the treatment of nearly all fractures of the femur, from the neck to the lower third?

First, the application of extension and counter-extension, which is of prime importance, is made with greatest facility.

Second, suspension and mobility are obtained,

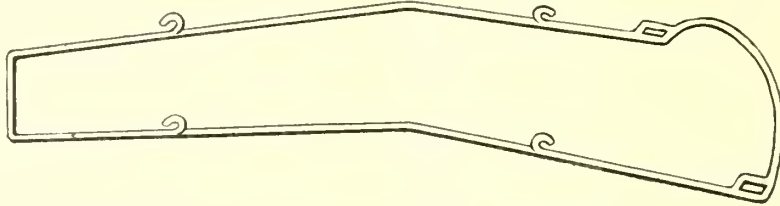


Fig. 6.—A modification of the Hodgen splint suitable for transport service. Inner arm is 40 inches long; outer arm is 46 inches long; lower end is 6 inches wide; upper end is 12 inches wide; openings at the upper end for a strap or padded cord.

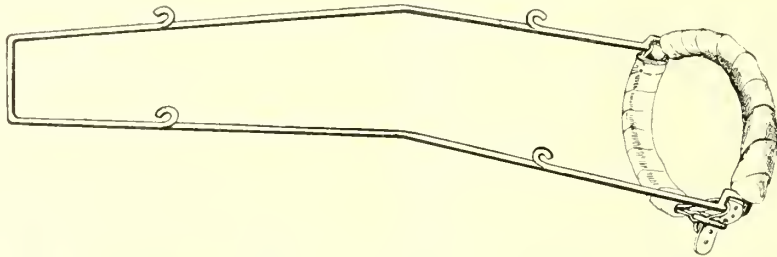


Fig. 7.—Indicates the manner of strapping transport splint to the thigh.

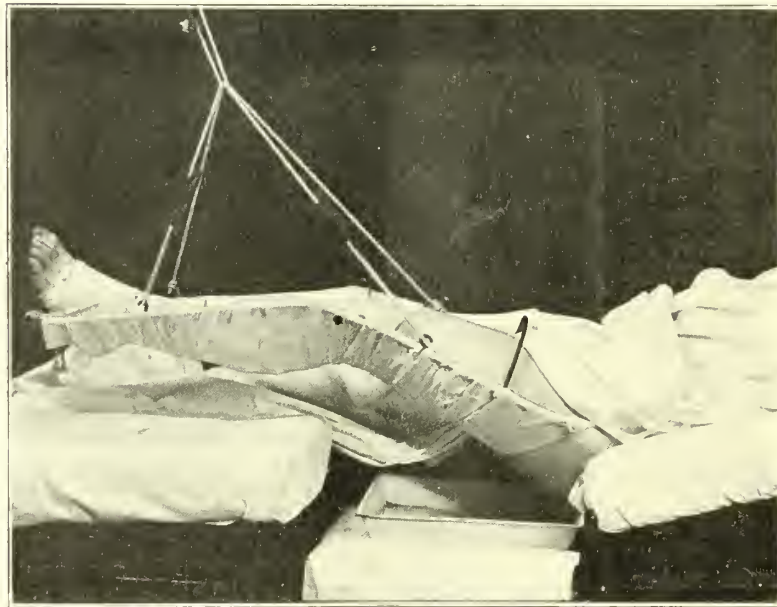


Fig. 8.—Illustrates the use of the bed pan with a Wallace bed.

mock. The bandages should overlap more closely in the perineum and be brought around the thigh as high as the crest of the ilium outside.

Now, what are the reasons for maintaining that the Hodgen suspension splint is the ideal

making for comfort, and therefore promotes repair, especially valuable in the aged.

Third, no absolute immobility is secured, but always enough to prevent displacement, and this stimulates repair and avoids the danger of muscle atrophy and pressure-paralysis.

Fourth, it is open always for inspection, measurement, massage, and the care of muscle and skin, and this arrangements makes far earlier and more complete recovery.

Fifth, it is easy to graduate the amount of extension and to make abduction, if necessary, for a fracture of the neck.

Sixth, for compound fracture, the greatest ease in caring for the wound.

Seventh, and not the least to be considered advantage, is the great comfort and ease the patient may have in bed, being able to move about and sit up, and have all the necessary nursing care for perfect comfort. This is the greatest factor for the aged. If they survive the initial shock with this much freedom they will be as apt to live as when they are gotten up and out, with the chance also of having good repair and a functioning limb.

PRIVATE AND AFFILIATED HOSPITAL ORGANIZATION *

LOUIS RASSIEUR, M.D.
 Captain, M. R. C., U. S. Army

Private and affiliated hospital organization may well be divided into two headings: 1. The Business Organization. 2. The Medical Organization.

The business end as a rule follows a well arranged plan which in most instances has been successful in the past and will, with slight changes from time to time, continue so in the future. As far as I could learn, doctors have been but little consulted in matters that shape the business policy of an institution. With what has been said we may dismiss this subject and turn to the consideration of the medical organization. This may well be taken up in detail as it alone is of interest to us. It may be divided as follows: 1. The organization of the staff. 2. The organization of the nurses. 3. The organization of the interns. 4. The organization of the laboratories.

1. The staff usually, and justly so, consists of members of the faculty of some medical school. Every member should early realize that his hospital connection is an asset to him and that it is his duty to become an asset to the hospital. The latter will only be true when he has learned to pass at least the entire morning of each day at the hospital in medical pursuits that are profitable to both the hospital and to the patients.

The work of the staff should be so arranged that they may give each day bedside instruction in diagnosis and treatment to one or two advanced medical students at a time.

All new patients, on the day of their arrival—charity as well as private patients—should

be thoroughly examined and a complete history written by the staff member and his intern. When the patient leaves the hospital the history with the bedside notes and laboratory findings should be carefully filed away alphabetically after having been cross indexed as to diagnosis, operative procedure, and whatever may be of special interest. The indexing and filing of histories can be attended to by a sister. It would be well that each member of the staff, in addition to his specialty, have a hobby, namely that he prepare himself to become an expert in some branch of laboratory work. It would be advantageous in the selection of a staff that this be kept in mind so that the staff as a whole would be quite competent to take over the direction of a complete laboratory, if the need be.

2. Organization of the Nurses. This is secured by the establishment of a training school for nurses. The teaching staff, at the start, should be selected from the senior members of the hospital staff, so as from the very beginning to impress the nurses with the importance of their work. All lectures should be on schedule time. Where the training has to do with the catholic sisters it would be well to have one sister specialize in each branch of the training and conduct the recitations in the respective branches. As the recitation sister progresses the time will come when she will conduct the lectures and the medical staff member will serve in an advisory way only. This plan has much good in it; for the sister conducting the recitation knows when the students have leisure time and may utilize this time in intensive training. Where this plan has been followed the students made their best grades in the nurses, state board examination in those branches thus conducted.

3. The Organization of the Interns. This is assured by a sincere medical staff and a good nursing organization. The intern is at that stage of his medical career where he is entirely dependent upon his environments. He acts by example only. He seeks an internship for instruction only. Unless trained with this end in view he is of little value and may do much harm. Whenever possible the intern should be selected from the affiliated medical school.

4. The Organization of the Laboratories. The laboratory is the essential feature of a hospital. It differentiates a hospital from a hotel or rooming house. It is the one justifiable reason for taking a patient away from his home and family. Without it, the perspective of the medical staff is confined to the physical examination alone; the nurse's work is limited to the duties of a sympathetic, obedient, housemaid; the intern forgets his scientific medical training for want of practical application. It is the key to progress of the entire medical organization. If the laboratory is highly devel-

* Read at the meeting of the St. Louis Medical Society, May 4, 1918.

oped it means that the patients are being observed from every angle that science dictates. It is gratifying to see the staff, the interns, the doctors who send their patients to an institution well equipped in this respect—work. The patients are not only observed from every view, but the textbooks and the medical journals are constantly watched for some new procedure which will make the diagnosis of some obscure condition more positive. Not only the diagnosis and practice of internal medicine, but surgery and all its branches becomes a more accurate art.

The organization of the laboratory is easy if the medical staff has been selected with this end in view. A school for the training of sisters in laboratory work should be organized. Instruction and training should be given in the following branches:

1. Urinalysis, analysis of feces, stomach contents and fluid exudates.
2. Organic and inorganic chemistry. The newer chemical analysis of the blood and urine.
3. Physical, microscopical and serological examination of the blood, including the Wassermann reaction.
4. Histological examination of tissues and the preserving of gross specimens.
5. Bacteriology.
6. X-ray photography, lantern slide and general photography.
7. Pharmacy, in all its branches.
8. Indexing and cross indexing of case histories. Follow up system.
9. Dietetics. During the past two years we have sent several sisters to attend the summer courses on dietetics given by the Wisconsin State University.

One sister should specialize in each branch but all sisters should listen to all the lectures and, whenever possible, take part in the practical work. All instruction should be given in the laboratory. Each branch should be taught daily one hour each. During the hours of instruction the current respective laboratory work arising in the hospital should be attended to so that the sisters early see the importance of the work. This also insures the doing of the laboratory work with the starting of the training school. The sisters assigned to this work shall devote their entire time to the exclusion of all other, excepting only their religious duties. There should be a library of books and journals pertaining to the above subjects. The students should be instructed in the use of the same.

The laboratory equipment should be of the best and latest design.

The efficacy of the laboratory for arousing interest in the various departments of the hospital for scientific betterment may be well illustrated by the following.

1. The testing out, from time to time, of the methods of sterilization at the disposal of the

operating room force proves highly interesting and instructive to the surgical nurses when the experiments are carried out with the assistance of the laboratory department.

2. The sterilization and tubing of catgut by the surgical nurses. Testing out its durability in animals, namely 10 and 20 day gut, is indeed interesting and arouses a keen desire to do aseptic surgical work. The preparation of this catgut is also a money saver for an institution.

3. It is well to let the kitchen force listen and look in on the laboratory work, for it makes them more observing of the food which they handle in the raw state. It is not an uncommon incident for the head sister in the kitchen to request a histological examination of a piece of meat. Thus they become acquainted with the gross appearance of tuberculosis of poultry, ecchinococcus cysts of rabbits and microscopical corroboration of the same. Among the findings are renal stones in calves.

4. Our guinea pigs, rabbits and mice become sick. The study of these conditions always proves a source of great interest as, for example, tumors in mice, puerperal septic pneumonia in guinea pigs. One guinea pig after having been aspirated monthly from the heart for one year, died of anuria, which was proved to be due to ureter stones lodged simultaneously in each ureter just where they enter the bladder.

Careful indexed and cross indexed records should be kept of all work done in the various laboratory departments.

To sum up I wish to lay special stress on the following:

1. While we may not assist in a business way there is very much left for us to do on the medical side.
2. Every member of the staff in addition to his specialty should be well informed in some branch of laboratory work.
3. The sister is a nurse for life. If well trained, she becomes an efficient factor in the management of a hospital.
4. The intern is in an institution for instruction only, a debt an organization owes to the sick of the coming generation.
5. The laboratory is the keystone to the hospital situation. 1. In aiding the staff to do their best. 2. In inviting the whole attention of the nurses by doing away with skepticism. 3. In building a scientific groundwork for the intern. 4. In giving the outside doctor who sends a patient to the hospital all the advantage of modern medicine. 5. In developing teamwork of all departments.

In conclusion I wish to say that in handling this subject I did not consult the literature, but have tried to describe the conditions we met at St. Mary's Infirmary, and how we reacted to them.

316 Metropolitan Building.

THE KITCHENING OF FOOD SUPPLIES
IN PUBLIC CATERING PLACES, AND
THE EFFECT ON GENERAL
HEALTH AND LIFE

GEORGE HOMAN M.D.
ST. LOUIS

No apology will be offered for the coining of a word that should fittingly describe the current processing of food substances in public catering places; for, to apply the word cooking or cookery to such practices would be in derogation of an old-time and honored expression. Therefore, the word kitchening has been chosen to describe the antecedents of the culinary travesties too often encountered in clubs, hotels, lunch rooms and restaurants of pretentious appearance and claims, by patrons of such establishments; and the present inquiry will deal to some extent also with the operation and output of public bakeries.

The production of bread was somewhat fully discussed by me years ago;¹ and palpable present culinary defects were considered more recently, with suggested remedial measures.²

The very general installation and use of steam, gas and electrical fixtures in the kitchen departments within twenty years or so has tended to revolutionize that form of service; and the fundamentals of wholesome food preparation, the proper proportioning of time and heat to substances treated, has been largely lost sight of in slap-dash, quick-service methods that are not only discreditable to those who pursue that calling but are a serious menace to public comfort and health. False pretense is by no means absent from many such places whose outward show suggests the whited sepulcher by a parade of tiling and other ostentatious fittings calculated to mislead and to withdraw attention from the culinary deficiencies and frauds there perpetrated.

The old-time saying, spoken at first perhaps in half humorous vein, that while heaven sends the food the devil sends the cook, unhappily was never truer than it is today, and the evidence in support of this assertion may be seen in the facial complexions of a majority of the people in the street—sallow, bilious, putty, clay, chalk, being designations used to denote such appearances; and this applies with especial force to the feminine sex, unfortunate as the fact may be.

Common experience, physiologic research, clinical observation, medical science, all would most likely agree in attributing such general conditions among human populations to that which is swallowed as food, to the alimentary

intake—or what was supposed to be such—and, if all these are in agreement, then the remedy must be found in a radical reformation of the kitchen service and ménage as now conducted; and such a reform appears even more imperative than was that voiced years ago and which found fulfilment in the founding of training schools for the effective preparation of nurses for the care of the sick.

A part of the scheme of deception, attempted or practiced by some of the catering concerns referred to, is the trick of printing on the daily menu figures that pretend to represent the nutrition value, expressed in calories, of the various dishes there served; a confidence game, however, that should deceive no intelligent person who should see that whereas such bold representations implied the most consummate possible exercise of the culinary art, still the outstanding fact would be clear that the foods there served were but evidence of merely third-rate kitchen attainment, although charged for at first-class prices. An additional play in the game is the employment of competent feminine table help, and this recourse tends to shunt aside much complaint that otherwise would be directed against the management by reason of the habitually tasteless, uninviting and often indigestible quality of the kitchen products there served—the harmful effects of which are, sooner or later, inevitably reflected in current sickness and death rates expressed in terms of dyspepsias, diarrheas, dysenteries, appendicitis, disorders of liver, pancreas, colon, etc.—in short, every organ or part within the belly cavity and elsewhere are injuriously affected by the inadequate or perverted treatment of food-stuffs thus handled or presented.³

Within the present year the writer has examined physically a number of young males, a great majority of whom were between 15 and 20 years of age; and as they were applicants for positions in a leading financial institution, their social station was perhaps above the average. It was found that 25 per cent. of the whole number gave evidence, either by personal history or surgical scar, that they had suffered from appendicitis; and, while it may be claimed that this was merely a coincidence, yet the degradation and demoralization in public cooking services has occurred within the last twenty-five years.

The need for radical changes in this direction is even more imperative than was that effected years ago by the overthrow of a combine of

1. Homan, G.: *Our Daily Bread*, St. Louis Courier of Medicine, May, 1901.

2. Homan, G.: *The Proper Preparation of Food, and the Proposed Founding of Training Schools for Cooks in Connection with Established Medical Colleges*, The Proctologist and Gastroenterologist, St. Louis, March, 1916.

3. A mischievous if not morbid consequence of such ignorance or incompetency in the kitchen is that the flat and insipid character of most of the dishes thus presented lead to an intemperate use by many of the patrons of such places, of fiery sauces and special seasonings to give an artificial savor, the milder forms being catsups, mustard, horseradish, etc.; and that diseased conditions must develop under such forced habitual stimulation of the digestive powers goes without saying—the fatalities of which may be read in the records of hospitals and graveyards. In practical effect it is not unlike whipping a jaded horse that, unable longer to respond to the lash, falls helplessly and may die in the harness.

milk dealers who claimed as legal privilege the right to slaughter the innocents by means of poisonous milk drawn from diseased cows kept in swill slop dairies; and they were beaten to their knees only after a bitter fight and made to accept regulations and standards of milk purity that, in their enforcement, have made cholera infantum a lost disease in the local lists of mortality. The moral and tactical advantage in this contest was on the side of those who fought the milk combine, as the destruction of young lives in warm weather was so swift in time and shocking in numbers that the defendants had nothing to stand on other than what legal technicality could offer or soulless greed suggest.

If eternal vigilance is the price of liberty, no less is such watchfulness the price of health and life—the Huns may be at the door in a guise that arouses no alarm—and this, not inaptly, denotes the conditions brought about by methods of public catering, pursued in the places indicated as being in appearance well calculated to deceive.

The injunction, often laid on the rising generation, to eat what is set before them may be quite valid when spoken within the domestic circle, but must fall to the ground when applied to concerns that cater to public needs; and when these perpetrate what is in effect a double fraud the obligation to make forcible protest becomes an imperative duty; and no amount of efficient table service, aided by a lavish show of spotless finishings and garb, can meet the first and ruling requirement of wholesome food, cooked in a wholesome way, and sold at a fair price, but it is very doubtful if these just conditions are ever fully met at this time.

The main mechanical fixture found in such places, large or small, is a steel plate, usually in plain sight, heated by gas-jets below, upon which are placed substances for culinary treatment—meats, certain vegetables, bread for toasting, flapjacks, biscuits, waffles, etc. The high temperature of the metal plate has a singeing or searing effect on the exposed substance, burning or scorching the outside, with but little penetration of the interior, with no development of aroma, or savor, or appearance upon which enjoyment of many dishes so greatly depends, and thus lending a relish that is a real stimulus to appetite and digestion. In the case of professed treatment by roasting, frying or baking, the process leaves the interior practically unchanged, it being a not unusual thing to see a cloud of steam rising from that which is placed upon the table as dry toast! Those that are stewed or boiled often betray in their unsatisfactory savor a lack of completeness in the kitchening process—beans, beets, corn, cauliflower, tomatoes, etc., usually exhibiting this defect—and thus is loaded on the

digestive function a burden that normal cooking could never impose. The ova of intestinal and other parasites found in meats, as tapeworms, trichinae and the like, cannot be destroyed by such haphazard performance in the kitchen; and it is to be doubted if anything less than unsparing publicity aided by law will avail to bring about an effectual change. In the more recent style of these public places are to be seen loopholed dens, the interior carefully screened from public view, with an outside finish of mirror or tiling, and wherein possibly is done the work that foreruns the dead men's bones spoken of in the scriptural story of the whited sepulcher and its contents.

An accepted definition of bread is worded as follows:

Good bread has a thick, fragile crust, which is not burnt, and which forms from 20 to 30 per cent. of the weight of the loaf. The crumb is white and filled with cavities, the partitions between which are easily broken down. These cavities should be distributed through every part of the crumb; otherwise the bread is sodden and heavy, and decomposes quickly. The bread should be of a pleasant odor and taste.

As bread is the most nearly universal of all forms of human food, in effect being used from cradle to coffin, its good quality is of first importance and takes precedence even of milk, so far as the total bulk of mankind is concerned; and if, upon investigation, it shall appear that this form of aliment, as found in the markets of St. Louis, has been so commercialized in production, and degraded in dietetic quality that it is no longer bread, then it behooves a public so defrauded to find a remedy for such conditions, and bring about an early and assured change as was finally effected with respect to the market supply of St. Louis milk.

Those who utter or deal in counterfeit money take prison chances in so doing, but the making and vending of counterfeit bread here seems to be a perfectly safe business; for a city government, singularly benevolent in its attitude toward this form of activity, seems to see nothing, hear nothing, know nothing touching this wrong to the people's purse and health. So far as is known the only legal restraint imposed being that a loaf of a certain weight shall be sold at a stated price—a condition that directly tempts to fraud; for, inevitably, the aim of the baker at every step would be so to load the loaf with moisture that water could be sold as bread, with consequences to unsuspecting users that will be indicated further on.

It has been said on good authority, technical in character, that the milling of grain for commercial bakery use is done with a view to producing a flour rich in gluten for moisture-retaining ends; the mixing of the dough with added alien substances, as forms of malt, etc., for the same purpose; and the rush of the mass

through the oven, are steps in a process that has the full appearance of a commercial fraud and an alimentary cheat.

As tried by the tests mentioned in the definition just quoted, such a product is not bread at all, as it has neither crust nor crumb; the outside of the loaf is a leathery casing often showing a varnish applied to prevent evaporation, and to lend a fictitious appearance of thorough baking. The interior is a sodden mass, loaded to the limit with water, and with a considerable part of the raw starches unchanged; and, if yeast has been used as a means of leavening, the yeast plant not destroyed by the quick transit of the loaf through the oven. This product, the outcome of studied craft and commercial greed, is then placed on sale in the market, or is delivered by foul hands to the doors of consumers, though sometimes visiting gutter or sidewalk before reaching such a destination.

The instinct of cleanliness is usually stronger in women than in men; but, in the case of such bread deliveries at private doors, the grace of the domestic oven for the cure of the outward befoulment of the loaf seems unknown, as, also, for driving off a part of the contained water; changing the starches to a more digestible form; and further, destroying any yeast plant that may possibly remain in the mass—with all its accumulated sins this questionable product usually goes directly to the table.

The old-time absurdity to the effect that eating hot bread is injurious still persists even in standard text-books, while the truth is that in point of mere temperature it is no more injurious than any other form of aliment taken when hot; it is the sodden, half-baked mass, swallowed as bolus, that is objectionable, inasmuch as the stomach powers cannot act effectively on it; and not digestion but decomposition follows. This is evidenced by fermentation, gaseous distention, distress, and the formation of chemical compounds alien to the organs concerned; and which, in their poisonous effects, ultimately involve the entire physical economy.

A few years ago, while seeking certain data, there came under my notice the narrative of an Englishwoman who, as a tourist, had spent some time among the peasantry of the mainland and islands of Greece. Her story seemed to rest on sound and careful observation and she spoke of the bread in use wherever she went among them as being delicious; the fundamentals as regards grinding, mixing, and baking being strictly observed with results which were epitomized in the expression mentioned. To apply such a descriptive term to the sinister product found in our local markets would be to sound the depths of falsehood, which no sane or honest person could do.

It would appear that certain races have a

natural aptitude for acquiring the elements of acceptable culinary practice, the black and yellow peoples seeming to possess the adaptability in marked degree; and the toothsome triumphs of an Aunt Chloe cannot be forgotten by those who have partaken of them. This gift was noted by me in the person of a colored girl not much over sixteen years whose breakfast bacon, for example, was excellent in every respect, appealing to every sense concerned; and beyond compare when contrasted with the tortured shreds of greasy leather as served, with no known exception, in every catering place in town. When asked how it came that she could accomplish such results the answer was, "Why, I'se right there!"

When the story is simple, the moral is plain; the case against present kitchening practices, and other catering delinquencies, has been stated; and, if it rests on known fact then the former experience of St. Louis gives the cue as to what is necessary for the municipality to do in the matter of a remedy; for, if the combine of milk malefactors could be overthrown, then the bread brigands in their organization must also be vulnerable; and, too, the pretenders in public eating places should be forced to a showdown as to their fitness for the positions they hold in such concerns.

(a) The federal authority, under its war powers, stopped short of a most important part of its duty by not entering the kitchens of every place catering to the public, and demanding the production of evidence as to skill and fitness for proper food preparation on the part of the kitchen staff to the end that no wastage of food shall occur through incompetents thus employed.

(b) Repeated searching inspections of such premises should be made by state authority; and, after due individual examination and approval, the licensing and registrations of the cooks and chefs therein employed, with power of revocation of such licenses for cause duly shown.

(c) The city government, as its share, should provide facilities for the testing of bread as strict as those applied to market milk—the samples to be taken from delivery wagons in the street. The official tests of quality would presumably attach little importance to mere weight, but would provide for:

1. A standard of water content, not to exceed a certain percentage, as in the case of milk.
2. A limit, not to be exceeded, of unchanged or insufficiently changed, starch content.
3. The determination of the presence in the interior of the loaf of the yeast plant, as evidence of insufficient baking.

After due notice to the bakeries concerned, the results of such analyses should be published by the city authorities, with names of concerns,

so that buyers would know whom to patronize—such official testing and publicity having been found elsewhere to have a more salutary effect than prosecutions in court, as dishonest bakeries would soon find no market for their output. Furthermore, the local government should itself produce a standard loaf for public instruction, exhibiting the desirable points and showing at what price a loaf of certain weight and approved quality could be sold at a fair profit. Such a bakery was operated by the city some years ago in connection with one of the large benevolent institutions, and the product was in general of an acceptable quality.

The kinds of fuel formerly used in public catering places—wood, charcoal, coke, coal—when once lighted burned to ashes. There was no wish to interrupt this process, the heat thus generated was more equable and in its application to food substances had less of the scorching effect than is seen in the case of steel plates heated with gas or the electric current. If such a form of kitchen range is to be retained a soapstone slab would be preferable, deliberate penetration by heat of the objects treated being desirable in the interest of flavor, aroma and digestibility. A vicious feature of present day work is that lower temperature and longer time is lost sight of, and that quick service and slow death not infrequently go hand in hand together.

Notwithstanding the extensive changes in style of equipment and operation of public catering places within recent years there seems to have been no effort made from that direction to lift the calling of cooks to a defined plane of attainment, or to establish standards by which the capabilities of such employees may be measured. So far as scientific knowledge and skilled competency are concerned that line of work seems to be in an utterly chaotic condition, without form and void, hence the necessity for the creation of responsible schools of training for such service.

So long as the proprietors of public catering places can befooled and cozen the public to their own financial advantage, either ignorantly or knowingly, it would be useless to look in that direction for any initiative toward better things, nor could any improvement be hoped for by the spontaneous action of kitchen employes; and therefore it seems that upon the medical profession must rest the duty of bringing to the people generally a knowledge of how they are thus cunningly being undone. This, however, is no new service to that profession and should at once be willingly undertaken.

As pertinent to the subject I shall in conclusion quote from the paper by me before mentioned, and published in March, 1916:

"This problem, as it touches both public and private life, can be settled only in the same way that the nursing question has been solved, but naturally on a

larger scale, that is, by responsible schools properly equipped giving approved courses of instruction in every phase of food preparation, care and handling, and the licensing and registration of such graduates under state law.

"Not only would such a line of action by medical schools be likely to result in manifest gains in population health and conservation of life, but would also tend to overcome a distressing economic feature of the present régime of inefficiency and ignorance, that is, the profligate waste in food supplies that now seems everywhere to be going on unchecked, and which my own observation has convinced me must average not less than 20 per cent."

ADDENDUM

Preamble and resolution offered by Dr. George Homan, and adopted at a meeting of the Medical Society of City Hospital Alumni, St. Louis, May 5, 1916:

WHEREAS, 1. The need for better methods of food preparation based on scientific knowledge of the properties of table supplies and correct principles of alimentary human nutrition is obvious to those in a position to observe the mechanical equipment and culinary processes of concerns catering to the public in this respect:

2. Even in private households of ample resources there is at times difficulty in finding domestic help fitted for the performance of wholesome and efficient kitchen service:

3. It would appear that instruction in this line of work by medical colleges of established standing and financial endowment would be a valuable and necessary extension of their educational functions, the partial analogy of training schools for nurses being instanced in support of this proposition:

4. The Medical Society of City Hospital Alumni in October, 1915, devoted a special meeting to this question and the general subject of human dietetics; and, by reason of its record as a leader in various movements for the public welfare, it is suggested that this subject is one in which it may fittingly take the initiative:

5. Intimation has been received from a responsible medical and educational source, representing one of the local university schools, that such a line of work would be quite natural for it to undertake and encouragement was extended that the subject be brought before the faculty for consideration; therefore be it

Resolved, That the Medical Society of City Hospital Alumni make overtures, by means of a committee or otherwise, looking to a conference with the authorities of the Washington University Medical School, the purpose being to consider and report the feasibility of securing the founding of a training school for cooks, as is indicated herein.

Odd Fellows Building.

OBSERVATIONS ON THE OPERATIVE TREATMENT OF FRACTURES*

ELLIS FISCHEL, A.B., M.D.
ST. LOUIS

It is not the purpose of this article to take up the cudgel either for or against the operative as opposed to the closed method in the treatment of fractures but rather to discuss various operative procedures which have solved or failed to solve problems for me. One has only to repeat my experience when in 1912 I went from a visit to Sir Arbutnot Lane enthusiastic for the use of Lane's plate to Sir Robert Jones, who is the master of treatment by closed methods, to realize that in the treatment of fractures more perhaps than in any other surgical measure, each surgeon must work out his own salvation. At the last meeting of the American Medical Association in the section on Orthopedics Allen¹ read a paper on fractures, one conclusion of which was that the use of all extension apparatus was obsolete; the discussion following was quite heated and many of those present plead guilty to great affection amounting almost to dependence upon extension in the treatment of certain fractures. Without giving more evidence of the chaotic condition in which modern surgery finds itself when fractures are the question, I believe we are all agreed that the methods we individually will use are those which we think will give the best result in the particular case in hand. No one would propose to operate on a simple Colle's fracture before he had attempted to obtain a satisfactory anatomical position by manipulation. I take this viewpoint about every closed fracture. However, there are some fractures which we know cannot be manipulated into proper position by closed methods, or after proper reposition cannot be held by closed methods; these cases of course must be considered per se cases for operative interference.

Whether you agree with me or not, let us suppose that some open method of reduction is indicated. Shall we try the Lane plate or the Albee bone graft inlay? Or if it be a transverse fracture, shall we use an intramedullary graft after the technic of Davison, of Hohlund or of Magnuson? or shall we place a band about an oblique fracture? Shall we nail or fit a dowel peg into fractures of the neck of the femur and humerus? Is the use of the Steinmann nail extension justifiable and if justifiable, is it of real service?

Let us first consider the Lane plate. Any operative interference must carry with it a minimum of risk to the life of the patient, must

be technically feasible to the average surgeon and must not only replace the fragments in nearly perfect position but must hold them there until additional adequate support can be adjusted. The use of the Lane plate does not add to the risk of operation as regards the life of the patient. The technic in itself is



Fig. 1.—Outward bowing in transverse fracture of the femur in spite of Lane plate and plaster cast.

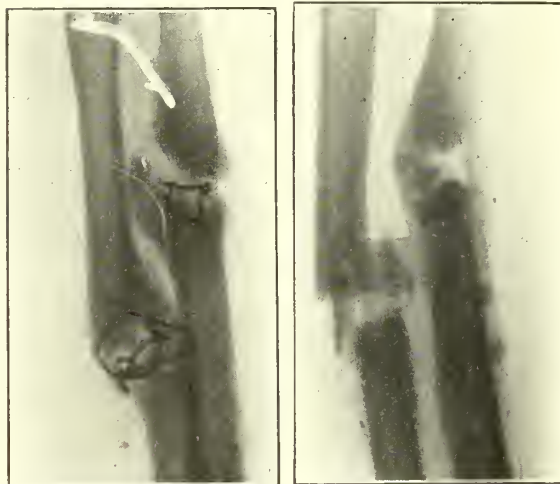
easily within the power of the average surgeon to acquire; but the absolute asepsis which depends upon the operating team is impossible of attainment with the facilities at the disposal of the average surgeon. The Lane plate will hold until additional adequate support can be ad-

* Read at the meeting of the St. Louis Medical Society, March 2, 1918.

1. Allen, H. R.: Jour. Am. Med. Assn., lxxix, Oct. 6, 1916.

justed; I unhesitatingly state that when properly applied it is the best fixation which can be applied to the shaft of a bone. Yet even with the plate we are not safe from subsequent malposition (Fig. 1). There is one very serious objection to the Lane plate as it has come to be widely used. I know nothing about the ultimate fate of the plates which Sir Arbuthnot Lane applies with his perfect technic; they may or may not remain indefinitely. But I have seen too many removed from two months to six years after their installation to permit me ever to apply one without warning the patient that at some subsequent date it might have to be taken out.

The Albee bone graft² is fine cabinet work applied to the art of surgery. Like high grade cabinet work it requires good tools and an expert craftsman. The cost of the proper ap-



Before.

After.

Fig. 2.—Inadequate support afforded by Albee bone graft in ununited fracture of bones of the forearm. The graft is slightly too short and its bed too wide. Kangaroo tendon was used in the attempt to hold the graft in place.

paratus is beyond the reach of the average surgeon and the technic is exceedingly difficult. Where there is marked tendency toward redispacement only the most perfect work will hold the fragments until additional support can be applied (Fig. 2). I believe it to be peculiarly adapted to the treatment of ununited fractures where there is little tendency toward displacement. The graft should never have to be removed except in the presence of frank infection of the wound.

The use of a band about an oblique fracture is one of the most obvious and oldest operative procedures. All sorts of different materials have been used to circumscribe the bone. It

remained for Parham and Martin³ to simplify the technic to such an extent that the procedure is one of the simplest and surest of all. I have found it much simpler to lift one fragment out of the wound sufficiently to pass the band under the end than to pass the band under the fragment as it lay deep in the wound. The only other difficulty is to cut the band at the



Fig. 3.—Callous thrown out completely surrounding a Parham band applied to an oblique fracture of the upper third of the shaft of the femur.

desired point. Bending forward and back, as advocated by Parham, frequently caused the band to break beneath the catch; a small pair of tinner's shears will cut the band at any desired point and the short end can then be easily hammered flush with the band. It is compara-

2. Albee, Fred H.: *Bone-Graft Surgery*, W. B. Saunders, 1915.

3. Parham, F. W.: *Surg., Gynec. and Obst.*, xxiii, 1916, p. 541.

tively easy to perform this operation with the absolute asepsis essential to bone work. The operation requires no special instruments except good bone-holding forceps of the Lane type and the special apparatus devised by Parham and Martin for the application of the band. There is no question that these bands will hold the fragments in place. They do no damage to the cortex of the bone except per-

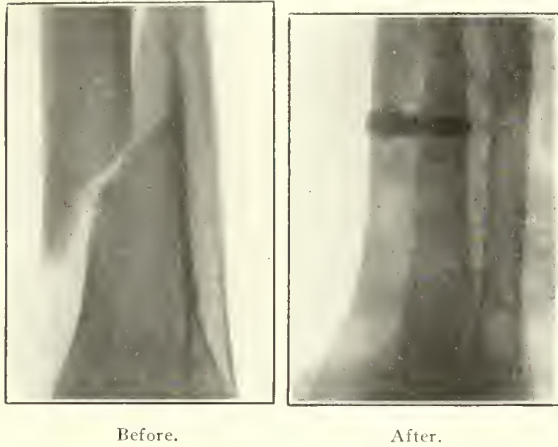


Fig. 4.—Delayed healing of skin wound over Parham band applied in lower third of tibia. Skin wound healed by granulation without removal of the band.

haps to the superficial layers through pressure necrosis. Possibly many of these bands will ultimately have to be removed, just as the Lane plate must be removed; time alone can tell; but there can be no question that a firm callous forms all about the band (Fig. 3). I have had one case in which the band was placed about an oblique fracture at the lower end of the tibia; the wound did not heal by primary intention although there was no frank infection; the skin finally healed without its becoming necessary to remove the band (Fig. 4).

The use of the intramedullary splint as a form of fixation has such a wide appeal and application that there are already at least three different methods of application. Høglund⁴ and Magnuson⁵ take the splint from the site of the fracture. Høglund's method requires a very extensive exposure of bone. Magnuson simply drives a wedge from the upper to the lower fragment or vice versa. Both methods require special instruments and prepared screws to hold the splint in position. I prefer the method described by Davison.⁶ The technic is simple, asepsis is easily maintained and it has the distinct advantage over other types of operation in as much as extension apparatus

to bring the fragments into apposition is unnecessary. I have found it quite feasible to insert the intramedullary autogenous graft using no special instruments except the Lane bone-holding forceps and reamers procured at a hardware store. The autogenous graft is taken from the upper third of the fibula, using the entire thickness of the shaft of the bone which is removed subperiosteally by means of the Gigli saw and bone-cutting forceps. The operation looks formidable especially in the case of fracture of the shaft of the femur in a powerfully muscled individual. But it is exactly in this type of patient that I have found the procedure most useful. It is one of the most gratifying sensations I know to feel and see the fractured bone ends slip into perfect apposition and to realize that they cannot slip out. As I stated before, the reduction is accomplished without shock-producing extension apparatus; the graft is first inserted in the distal fragment and then by manipulation guided into the proximal fragment which has been prepared to receive it. Of course there is no objection to the use of the tibia as the source of the bone graft. I prefer the fibula because it is stronger and does not require a motor driven rotary saw or chisels to obtain the graft. This technic is applicable to a transverse fracture of any long bone of the extremities. I have never used the technic of Høglund or of Magnuson, who make use of a graft obtained from the seat of fracture and of screws to hold the graft in place. It is open to the same criticism as that I applied to Albee's bone graft inlay, viz.: too much special apparatus and too much specialized technic.

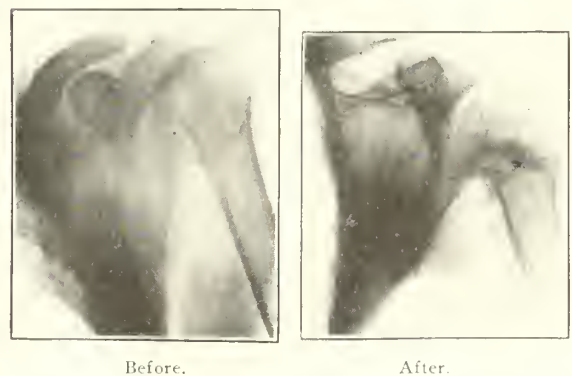


Fig. 5.—Bone peg used in fracture through anatomical neck of the humerus. Resultant position apparently perfect, yet patient had marked disability when last seen over a year following injury.

The treatment of fractures of the neck of the femur and of the humerus will always have its disappointments because we are dealing with structures involved in the injury other than bone and a good anatomical result will not

4. Høglund, E. J.: *Surg., Gynec. and Obst.*, xxiv, February, 1917.

5. Magnuson, Paul B.: *Surg., Gynec. and Obst.*, xxiii, 1916, p. 554.

6. Davison, Chas., and Smith, Franklin D.: *Surg., Gynec. and Obst.*, 1915, xxi, p. 366.

guarantee satisfactory functional use (Fig. 5). In those few cases of recent fracture where operation is decided upon, certainly the most rational procedure is the bone peg through the neck engaging the head. In the case of the humerus it is not a very difficult operation because the parts are comparatively superficial and the length of the bone peg is not great; but in the case of the femur it is exceedingly difficult to maintain absolute asepsis because of the great depth of the wound. In performing this operation I have used the incisions recom-

head of the nail should always project well beyond the skin wound so that it can be easily withdrawn after it has served its purpose. I am not yet fully convinced that the nail is any superior to utilizing the recommendation of Cotton,⁷ e. g., to drive the neck onto the head fragment by the use of a padded mallet on the greater trochanter.

The so-called Steinmann nail extension was first used and advocated by Cordovilla in 1903. Steinmann,⁸ however, in a masterly monograph has worked out the technic and indications for its use in a way which has served to popularize the method. The introduction of the



Fig. 6.—Comminuted compound fracture of the lower end of tibia. A plaster of paris cast with window cut for dressing failed to hold fragments.

mended by Albee. My hole for the peg has been first drilled with a hand drill and then reamed to the size of the graft with hand reamers.⁹ Here again the fibula serves very well as the bone peg. If too uneven or too large its circumference can be diminished with a file or good bone biting forceps. Certainly good results have been obtained in these fractures by the use of the wire nail. In case the condition of the patient does not warrant the extended operation of procuring and fitting the bone peg the nail is a useful way out; but I believe the



Fig. 6a.—Final result after use of Steinmann nail extension.

nail is a minor surgical procedure easily performed under strict asepsis without a general anesthetic. I wish to call attention to two important points in the technic which I believe are often overlooked and are the cause of trouble in some cases. The first is that the wounds of entrance and of exit of the nail through the skin should be made by the nail itself and not with a scalpel.⁹ The second is

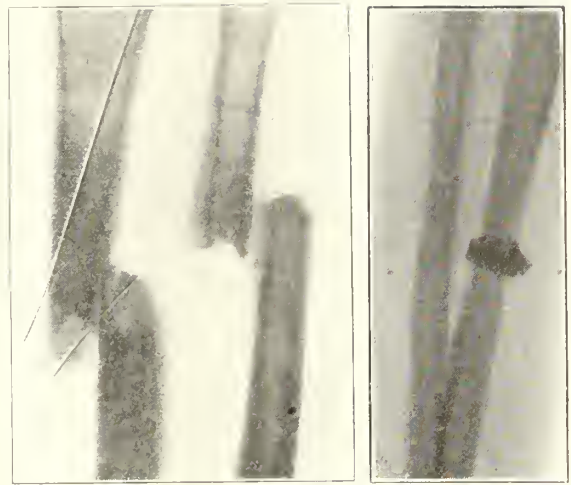
7. Cotton, F. J.: Boston Med. and Surg. Jour., 1916, clxxv, p. 438.

8. Steinmann, F.: Die Nagelextension der Knochenbrüche, 1 Band, Neue Deutsche Chirurgie, 1912.

9. Ibid., p. 41.



Fig. 7.—Steinmann nail through tibia at the level of the tuberosity and forty pounds weight failed to bring this fracture into line.



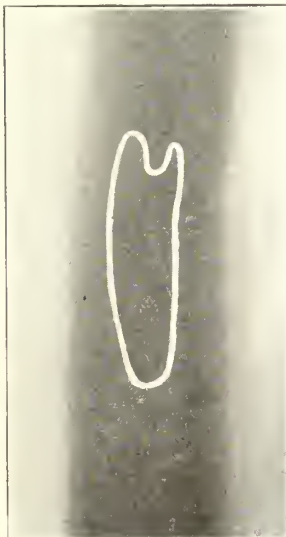
Before.

After.

Fig. 9.—Fracture of both bones of the forearm. Intramedullary graft in ulna and Parham band about radius. Firm union and unimpaired function in six weeks. Woman age 25.



Before.



After.

Fig. 8. Intramedullary graft for transverse fracture of the femur using full thickness of the fibula.

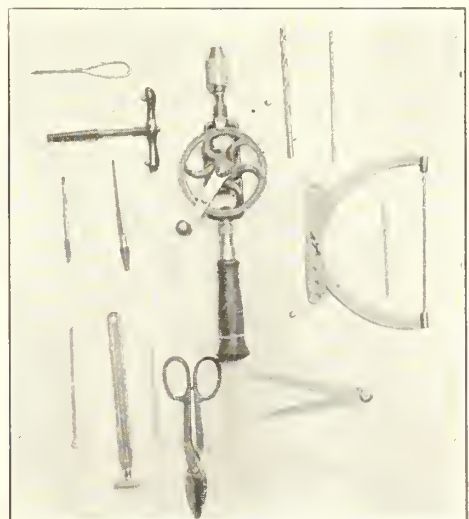


Fig. 10.—Special instruments which have adequately served in the use of the intramedullary graft, the bone peg transplant, the Parham band and the Steinman nail extension.

that the nail must never be passed through tissues the seat of an ecchymosis.¹⁰ If these rules are adhered to and if the nail is always placed in cancellous bone I believe that the method is safe and it certainly will help to apply extension in cases where the use of adhesive plaster or any other method that I know of is impossible. (See Fig. 6.) That extension alone will not reduce all fractures where extension seems indicated is demonstrated by Figure 7. In this case, as will be seen, the fracture was in the lower third of the femur with the usual posterior displacement of the lower fragment. The nail was driven through the tibia above the tuberosity with the knee flexed and the foot of the bed elevated 30 degrees; enough weight was used to pull the patient to the foot of the bed and yet the fragments did not come into line. There was fibrous union at the end of six weeks with no tendency to redisplacement. The patient was lost sight of after eight weeks. I do not know whether or not firm bony union ever took place.

SUMMARY

Undoubtedly we have at our disposal today comparatively simple methods for the operative treatment of fractures which will materially help us to procure better anatomical results.

The Lane plate because of its propensity to cause future trouble necessitating its removal should be used only in those very rare cases where other methods are not available.

The Albee bone graft inlay requires a too specialized technic and instrumentarium to make it practical as a method of general use.

Transverse fractures of the shafts of long bones in adults are best treated by the autogenous intramedullary bone splint.

The Parham-Martin band is a simple and efficient method for the treatment of oblique fractures.

Extension by transfixion of bone after the method of Steinmann is a useful mode for the application of extension where other nonoperative methods are inadequate.

No method of operative treatment obviates the necessity for the careful application of external fixation which should be applied with the object in view to maintain until union has taken place the bony fragments in the position in which they were left when the operative wound was closed.

The use of expensive specialized instruments and apparatus for successful operative fixation of fragments is unnecessary.

400 Metropolitan Building.

SURGICAL ASPECT OF BRONCHIECTASIS*

HARVEY G. MUDD, M.D.

ST. LOUIS

True bronchiectasis is rather a rare disease therefore experience in its treatment is, of necessity, somewhat limited. It seems certain, however, that medical treatment is unsatisfactory. The only considerable prospect of benefit is offered by surgical interference. A number of ways have been tried surgically. Collapse therapy has been thoroughly tested. Resection of ribs, allowing a collapse of the chest wall; injection of nitrogen gas, giving artificial compression of the lung; operative pneumothorax with separation of the lung from its adhesions, thus facilitating shrinkage of the lung; all have been found absolutely unsatisfactory. Gauze packs have been placed inside the thorax to squeeze the diseased lung down on the bronchiectatic cavities; extrapleural compression (Tuffier) in order to force the parietal pleura against the lung. All these methods have failed to cure and results have been disappointing. The walls of the bronchi in true bronchiectasis are thick, not easily compressible, and these efforts to cure by forcing the lung down on the cavities have been aptly compared to the pressure of a sponge on a mass of pipe-stems. There is produced collapse of the lung by this procedure; the lung volume is diminished. The gross secretion may be markedly reduced and the patient is often encouraged to believe that he is greatly benefited; but his elation is apt to be premature. He is disappointed later to find that the improvement has been trivial and in nowise commensurate with the risk undergone in a serious operation. Hence we may say that the collapse therapy in bronchiectasis is a failure. Ligation of the pulmonary artery as practiced experimentally by Sauerbruch-Bruns has been suggested. This procedure has been tested in an experimental way on dogs. It has been found that the interalveolar spaces become occupied by an over-growth of connective tissue producing a condition resembling fibrosis. So far as I know this treatment has not been tested in actual practice but I am sure that it would not succeed in securing the condition. I believe any benefit which might be brought about would not compensate for the risk of the operation. Pneumotomy has been tried a number of times, probably largely because there is so frequently a confusion between bronchiectasis and abscess of the lung. The diagnosis between the two conditions is, of necessity, difficult and confusion of the condition is not rare. Bronchiectatic cavities are rarely confluent and surgical opening of one, even if the cavities be connected,

* Read before the St. Louis Medical Society, May 25, 1918. Medicine, May, 1901.

10. *Ibid.*, p. 41.

does not result in satisfactory drainage of neighboring cavities. The wound drainage so far as we have observed is usually small as compared with the mouth drainage. In one case, believing we had to deal with a lung abscess, drainage was tried. The tube was placed in the center of the group of bronchiectatic cavities but even in this case mouth drainage was greater than the wound drainage. Cures have been reported, many isolated cases and occasional groups of two or three. Careful analysis, however, lead one to suspect that abscess rather than bronchiectasis was the condition cured. According to Robinson, whose exhaustive paper on bronchiectasis gives perhaps the latest and most complete summary, there is but one successful treatment in cases of true bronchiectasis, that is the excision of the diseased lung tissues. I quote from his article to show especially how *limited* are the number of cases which he considers fitted for this treatment. Robinson says: "The group of suitable cases, however, is small. A young adult with a basal process confined to one lower lobe, with profuse sputum, offensive but not fetid; with slight, if any rise in temperature; with loss of weight without emaciation; with a normal heart and properly functioning kidneys; this is the type of individual in whom lung resection, properly executed, is attended with good chance of cure. It matters little whether the disease is of the cylindrical, ampullary, or large cavity type, provided the general condition of the individual is as specified. Not more than one in every ten cases of bronchiectasis entering a hospital clinic represents this favorable type. The remaining nine are unsuitable."

As regards lobectomy there must be a choice between the one stage and the two or more stage operation. Published reports seem to indicate that the two and three stage interference offers a better probability of cure than the one stage. Robinson reports the two or three stage procedure in five cases. Four have recovered. One died fifteen days after the first stage of the operation. The one stage operation on a healthy dog is safe and simple. The one stage operation in human subjects, with diseased lungs and perhaps other complicating conditions, is anything but simple and is not safe. In the one stage operation in a healthy dog, lung infection is not a danger. In man with diseased lungs and pleura the same one stage lobe resection has often been attempted. The mortality has been at least 90 per cent. At present the two or three stage operation seems safer and saner. It is better for the thoracic cavity to gradually accommodate itself to the new conditions. Until recently excision of a lobe has been more or less accidental and has resulted more often as a final stage of a series. Frequently there have been cases in which the first operations have

been performed for draining of a supposed abscess. Lung was contracted—a subsequent empyema had been drained—operations performed for cure of the empyema had brought about collapse of the chest wall. Finally perhaps the shrunken lobe was cut away as the final exploit. In this way amputations which were not thought of when the preliminary operations were made have been reported. It is more than likely that the preliminary operations in these cases were responsible for the success of the amputation. I do not propose to go into the surgical technique of the various operations, but will say that in the two or three stage operation Robinson advises that the patient should lie for an hour on a bed with the foot elevated immediately before the operation. In this way he believes that we get better emptying of the bronchiectatic cavities into the trachea and the secretion is largely coughed out of the trachea before the operation is begun. Robinson recommends the use of ether and recommends also that the anesthesia should be lightened at intervals sufficiently to allow coughing to clear the trachea of the foul secretion. Also he uses tracheo-bronchial aspiration by tube introduced into the trachea to the bifurcation and suction applied or aspiration made by means of a tube passed through the nose into the pharynx. After resection of the 7th, 8th, and 9th ribs from the angle of the anterior axillary line is made the skin is closed and a compression pad applied forcing the chest wall down on the diseased lung. Such operation usually is not attended with shock but blood loss is inevitable and Robinson says, "patient is in no condition to bear the added insult of pleurotomy and handling of the lung." According to Robinson the sole danger after the first stage is undue retention of purulent secretion. Cough is very painful and the expulsion effort of the cough is much less effective than before operation. In the second stage the wound is opened—the lung is separated from its adhesions all about, including the separation of the lobes at the fissure. The adhesions about the costodiaphragmatic angle and the diaphragm are apt to be tough and unyielding and sometimes require cutting. Depending on the ease with which this second stage is accomplished and the condition of the patient the decision as to whether to finish the operation at once or make it a three stage procedure must depend. In case the conditions seem to permit amputation at this time the patient has the advantage of being practically sputum free afterward and the convalescence is not complicated by the retention of this purulent secretion. It must be emphasized that expectoration is more difficult and less effective after this stage than after the first. The amputation is done either by compression of the root of the lung with forceps or after tying off the

lobe of the lung en masse with heavy silk. There is usually some bronchial leakage from the stump. If in the freeing of the adhesions of the lobe of the lung indications arise which make it seem best to stop and make a three stage operation the lung is carefully packed off with gauze. This is best done with strips of gauze six inches wide, eight thicknesses. This packing must be very carefully done. The gauze is carefully fed into the thorax in such a way as to prevent the lung which has been loosened from its attachments touching the parts from which it has been separated. The separation of the lung is the difficult part of the procedure. It is very apt to bring serious bleeding and care must be used in stripping the lung from its adhesions, otherwise tearing of the lung tissue will occur. Separation of the interlobar fissure is often extremely difficult. The utmost caution must be used not to employ too much force in this region so as to avoid the separation of the adhesions which at this time should be holding the upper and middle lobes to the parietes. It is best to separate all the other attachments before those to the diaphragm so that if bleeding occurs during the separation from the diaphragm a clamp may be applied temporarily in the region of the hilus of the lobe. Robinson remarks that to one familiar with the lay of the land the necessity of the three stage performance is diminished. He says that to be able to stop the operation in the middle of the second stage and defer the final stage, amputation, to a later day is a conservative measure which should be resorted to in difficult cases and one which the surgeon should welcome. It may save the patient from hemorrhage, shock and carbon dioxide poisoning. If at any time during the process of separation disturbance in respiration occurs the skin and muscle flap is swung down to cover the pleural defect. This flap is jammed against the chest until clips can be applied bringing the skin together making an air tight closure of the pleura. This frequently brings about a recovery at once. As a result of his experience in these operations Robinson believes that the first and second stage should be perhaps approximately one week apart. Between second and third stages two or three weeks' interval should be sufficient. He says that in his cases undue intervals have been frequent, no doubt as a result of unfamiliarity with the course of events.

Intercostal Lobectomy.—To open the thorax without resection of ribs, the technique which Mikulicz-Sauerbruch utilized in experimental surgery with dogs, Robinson considers unquestionably an ideal method. The intercostal incision followed by rib spreading, with the division of one or two ribs at or near the junction of

the cartilage of the rib gives perfect exposure for the intrathoracic operation. Lobectomy through this opening has been universally successful in animals. Lilienthal reports five complete lobectomies by the intercostal route in men with two deaths. With certain other surgeons the mortality with the same technique has been 100 per cent. Robinson in his conclusions says among other things that, "in the present status of the development of thoracic surgery lung resection should be performed in the two or three stage operation." Again quoting: "The operation of intercostal lobectomy is a distinct technical advantage. When performed in one stage undue risk of life is increased. The physiological advantage of the several stage technique may yet be successfully combined with the technical advantage of the intercostal exposure."

In view of this rather unsatisfactory showing of surgery in bronchiectasis the report of two cases in the experience of Dr. Elsworth Smith and myself may be of interest.

April 12, 1913, case of young man 27 years old. Consultation with Dr. Smith. Diagnosis of purulent collection in the lower lobe of the left lung behind. Collection was apparently bounded above by the lower border of the seventh rib and below by the ninth rib. Was perhaps three inches across from side to side. There seemed also to be a collection of fluid in the thoracic cavity below this, the collection in the pleura apparently extending as high as the seventh or eighth rib. History extended back over several months. No evidence of tuberculosis. Under ether, intratracheal insufflation (April 12, 1913), aspirating needle introduced near the angle below the tenth rib. Entering the pleural cavity nothing was found. Pushing the needle forward and inward into the lung a small amount of thick pus was withdrawn. Then cutting down on the tenth rib perhaps 1½ inches were resected. The pleura was opened and no collection of fluid found. Lung found adherent to the pleura. The adhesions were separated with the finger for some distance about but no pus was found. Needle was then introduced into the lung pretty deeply forward and inward. Again a small quantity of thick pus was withdrawn. Lung was then cut into and the needle followed with the finger to the end. No pus collection was found. As the pulsation of the heart apex could be plainly felt with the finger, thought best not to go any further. A large drainage tube was introduced into this part of the lung and a second tube placed in the pleural cavity at the lowest part. On May 12 the roentgen ray showed evidence of bronchiectasis. On June 19, under ether, intratracheal insufflation, another effort was made to drain the cavity. Needle passed into where the cavity was thought to be located. No pus was found. Parts of the ninth and tenth ribs removed. Needle was then introduced through the pleura into the lung tissue and a small amount of pus withdrawn. Needle was followed by a knife. Just at the end of the needle an irregular cavity could be felt, the larger part of it running forward and the smaller part running downward. A large sized drainage tube was placed so as to drain the lower portion of the cavity. In the upper portion of the cavity could be felt what was thought to be an opening into the bronchus. Patient seemed to improve for a time but the operative opening closed and he began to cough up sputum in large

amount again. After both operations there was, for a time, a marked lessening of the offensive sputum and discharge from the wound of the same character as the expectoration. We then considered lobectomy and also had under consideration the cutting out of a block of lung tissue containing what we believed to be the diseased portion, with the cautery, but the patient refused further operation and preferred to try the effect of climate in the West. He returned in June, 1915. At this time he had some fever and cough, and almost complete consolidation of the left lung could be made out. Roentgen ray at this time seemed to indicate a pleural cavity filled with fluid. It was thought best to investigate. June 25, 1915, under local anesthesia, chest was opened at the site of the old scar. The bones were cut away so as to allow the introduction of the finger. A knife was then pushed into the pleura. A small amount of stinking pus was evacuated. A rubber tube was again introduced into the cavity in the lung and fastened. Discharge from the lung through the tube was free. It had the same odor as the stuff formerly expectorated (June 26). The sputum was noted as being reduced in quantity, of a different character and not at all offensive. On the 28th it was noted that the sputum was about one-half the quantity before operation, seropurulent in character and only offensive after considerable effort at coughing. Patient looked and felt better. Discharge continued free and very fetid. On June 30, about 8 a. m., patient had profuse hemorrhage from the wound and from the mouth and succumbed. Postmortem showed, on the left side, lung consolidation and bronchiectatic cavity the size of an English walnut with firm wall. Below and adjacent to this, were three smaller bronchiectatic cavities. The whole lower portion of the lung was full of small cavities. In the upper and middle lobe consolidation and some small bronchiectatic cavities. In this case the rubber tube led directly into the larger part of the cavity. Drainage absolutely failed to bring a cure and was unsatisfactory.

In April, 1916, Mrs. W. H. T., aged 58 years, came into Dr. Smith's hands and I was called in consultation. We believed that here was a case of pleural vomica. Dr. Smith and I have had a number of cases of this condition together. In this case there seemed to be a circumscribed collection of fluid in the lower part of the right thorax posteriorly, extending from the eighth rib to the diaphragm and extending at the widest part 14 cm. outward from the midline of the back. Under ether, May 1, trocar and cannula introduced to the center of the supposed collection and no pus obtained, but what looked like old clotted blood was withdrawn. May 3 another attempt was made with the exploring cannula. This was introduced about two inches higher than two days before. We again withdrew what appeared to be clotted blood. When the cannula was withdrawn it showed what seemed to be a little pus and the chest was opened at this point. A portion of the eighth rib was resected and a cavity opened up along side the cannula. On exploration with the finger a number of masses of thick pus were evacuated. Very little bleeding. What looked like clots or possibly a new growth was found. A double drainage tube was introduced to the bottom of the cavity. On account of free bleeding, lower part of cavity was packed with gauze. On June 24, 1916, under ether, more of the eighth rib was removed and the posterior portion was removed nearly to the vertebral articulation; also the ninth rib removed for the length of 5 or 6 inches. The lung was found adherent to the thoracic wall and was torn in one or two places. Could find no evidence at this time of an abscess in the lung. On Dec. 13, 1916, patient returned, showing a sinus which had developed; meantime no decrease in her harrassing cough

or sputum. The sinus was injected with bismuth and a stereoscopic radiograph made. It was evident that we had to deal with a multiple, circumscribed bronchiectasis. We expected to do a lobectomy but concluded to explore again with the new information obtained from the radiograph. Sinuses were found leading to dilatations of bronchial tubes containing pus. These sinuses were followed with the grooved director and a cautery knife introduced in the groove of the director. One of the sinuses was followed to the end—the attempt being made to destroy the walls of the bronchial tubes with the cautery. Following the second sinus the knife pushed through a vein of some size which started a severe bleeding, making it necessary to control hemorrhage by a firm gauze pack. There was almost immediately a decided improvement in the patient's condition. Cough lessened, also the amount of expectoration. On Dec. 22 we decided to cauterize further. Patient was given $\frac{1}{3}$ grain morphin and $\frac{1}{450}$ of atropin and the cautery used without further anesthesia. Two of the sinuses were followed up with the cautery knife so deeply that the impulse of the heart action was tremendously evidenced by the movements of the director. While following other sinuses hemorrhage again forced us to quit. We located sinuses and pus pockets by the pus ejected from the open end of the bronchial tubes on coughing. Destruction of these sinuses with the cautery knife was done on numerous occasions in the next few months. We noticed that during these treatments patient suffered no pain so long as the cautery knife was working in the lung tissue. Occasionally she spoke of a slight pain referred to the upper abdomen. Cough, expectoration and pain grew continuously less until they have practically entirely ceased. Patient's general condition has improved tremendously; "Feels like another woman." There remains a slight discharge from the wound and a probe can be introduced into at least one opening, producing cough at once, evidently the stump of a bronchus. I saw patient two days ago. She says she coughs occasionally in the morning and sometimes once or twice through the day, but the cough is not at all harrassing or distressing and patient finds herself practically well. There is no expectoration and no pain.

We realize the futility of basing any very considerable conclusion on experience in one or two cases; but, considering the limitations put on the operation of lobectomy by Dr. Robinson and taking into account the very serious character of this operation, we believe that the procedure which was followed in the case of the woman offers possibilities in the treatment of this disease which are worthy of consideration. Some cases which would not permit of any great surgical procedure may be greatly benefited, even clinically cured, as we believe, by the procedure followed in our second case. Also the injection of bismuth in cases where there is a sinus present offers an opportunity to get a radiographic picture which would often be of very great interest and would help in showing the location and extent of the bronchiectatic cavities. We offer this suggestion hoping that it may lead to definite good results in cases which perhaps would not be satisfactory or safe for lobectomy.

Humboldt Building.

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EDITORIALS

FIGHT FOR INCREASED RANK WON

The long struggle of the medical profession for higher rank in the Medical Reserve Corps of the Army has been won, although some concession was forced from us concerning the number of general officers. The provision increasing the rank of the Medical Reserve Corps officers was attached as an amendment to the Military Appropriation Bill which was passed by Congress and on July 10 was signed by the President. It is therefore now a law.

This law provides for an increase in the Medical Department of the Regular Army by the addition of one assistant surgeon-general, who shall have the rank of major-general, for service abroad during the present war, and of two assistant surgeon-generals who shall have the rank of brigadier-general. These officers must be appointed from the Medical Corps of the Regular Army. In addition to this increase in general officers, the President is given the power to appoint two major-generals and four brigadier-generals in the Medical Department of the National Army. These officers will require confirmation by the senate and must be drawn from the Medical Corps of the Regular Army.

For commissioned officers in the Medical Reserve Corps of the Army the highest rank permitted is colonel, but the number of officers in the several grades from lieutenant to colonel will be the same as now provided by law for the Medical Corps of the Regular Army.

It required ceaseless efforts on the part of the medical profession and our friends in congress to obtain the passage of this measure even in its abbreviated form, for it is said that the Secretary of War and the General Staff were uncompromisingly opposed to any legislation along the lines of the Owen-Dyer bill. However, the law gives the medical officers a very substantial increase in authority and will furnish the Medical Department of the Army an opportunity of demonstrating what scientific medicine can do in maintaining the physical well-being of the troops because the orders of the medical officers will not now be so often pigeon-holed or countermanded by a superior

officer, especially one whose medical lore convinced him that because he did not take typhoid fever by drinking a cup of water from a condemned well the water must therefore be potable and would not infect the men in line. Senator Owen and Congressman Dyer, the latter one of Missouri's representatives, deserve the thanks of the medical profession for their untiring efforts in securing the passage of this measure. The section embodying the changes in the Medical Department of the Army follows:

Increase in Medical Department: That the Medical Department of the Regular Army be, and is hereby, increased by one assistant surgeon-general, for service abroad during the present war, who shall have the rank of major-general, and two assistant surgeon-generals, who shall have the rank of brigadier general, all of whom shall be appointed from the Medical Corps of the Regular Army.

That the President may nominate and appoint in the Medical Department of the National Army, by and with the advice and consent of the Senate, from the Medical Corps of the Regular Army not to exceed two major-generals and four brigadier-generals.

That the commissioned officers of the Medical Corps of the Regular Army, none of whom shall have rank above that of colonel, shall be proportionately distributed in the several grades, as now provided by law.

That the commissioned officers of the Medical Reserve Corps of the Regular Army, none of whom shall have rank above that of colonel, shall be proportionately distributed in the several grades, as now provided by law for the Medical Corps of the Regular Army: Provided, That nothing in this act shall be held or construed so as to discharge any officer of the Regular Army or deprive him of a commission which he now holds therein.

GOVERNOR GARDNER SETTLED IT

A row at State Hospital No. 2, St. Joseph, early in July, was promptly squelched in its incipency by Governor Gardner when he summarily dismissed three members of the board of managers who had ousted Dr. Porter E. Williams as superintendent and elected Dr. Frederick Riley of Clyde, Mo. For quite a little spell the affairs at the various state hospitals have been undisturbed by factional disputes, and we had begun to hope that the boards of managers were quite well satisfied that the medical officers are doing all that could reasonably be expected of them under the present method of administering these institutions. The governor had chosen his boards with considerable care and, aside from a little explosion at Nevada some months ago, the state hospitals seemed to be living within their appropriations and otherwise conducting themselves as well behaved wards of the state should do. Events however proved that this optimism was premature, for, without any preliminary rumbling such as usually precedes these upheavals, the board of managers of the St. Joseph hos-

pital met in regular session and proceeded to elect a superintendent to succeed Dr. Williams whose term expired on July 1. Dr. Williams is a physician who has had considerable experience in the management of such institutions and possessed the confidence of the governor and at least two members of the board and of the entire medical profession of the state as a physician thoroughly in accord with the highest ideals of our profession and a consistent member of our organization. No flaw was found in his administration of the institution and no criticism was advanced against him by the board before his removal. Nevertheless, three members of the board, constituting a majority, without giving any reason other than that "his term had expired," voted to oust him and elected Dr. Riley. Dr. Riley formerly lived in Adair County and was a member of the Adair County Medical Society for a while, but he seems to have valued such affiliation lightly for he failed to pay his dues before he left Adair County and did not join the county medical society when he settled at Clyde, therefore he was dropped from our rolls for non-payment of dues.

Governor Gardner has stated that he visited the St. Joseph Hospital only a short time before Dr. Williams was removed, and found the institution in a high state of efficiency, so that when this unexpected change in the medical staff was announced he promptly decided that a good superintendent was more important to the inmates of the institution than were certain members of the board of managers, and he ordered the dismissal of David T. Maddux, L. J. Eastin and Roy Fitzsimmons. In their places he appointed Dr. Arthur Nelson, a physician of Bunceton; Edward Kelso, a lawyer of Grant City, and G. D. Berry of St. Joseph. The other members of the board are Jas. H. Hull of Platte City, and L. J. George of Kansas City. This new board met and organized immediately, and Dr. Riley offered his resignation which was accepted. The board then elected Dr. Williams as superintendent.

Irrespective of the political faith of the members of our organization we believe the action of the governor will be generally approved by the medical profession. The motto of President Wilson that "politics is adjourned" for the period of the war should be the motto in peace as well as in war for the management of all the eleemosynary institutions of the state. From all the published accounts of this unfortunate outbreak one can see no occasion for it other than "the renewal of the old fight for patronage," although if that is true the candidate who expected to be benefited has been neatly camouflaged.

The lay press freely commented on the affair, in general supporting the action of Governor

Gardner. The *St. Joseph Gazette*, however, does not accept the governor's interference with equanimity. The removal of the three members of the board, this paper says, "was an exhibition of arbitrary and autocratic control of a state institution that was not expected of the present governor of this great state." The writer of the editorial in the *Gazette* concedes that the governor had a perfect right to act as he did, but thinks "it is one thing to have the power of a giant and another to use that power like a man." To quote further:

Governor Gardner has evidently fallen into the error of imagining that he must give personal attention to the detailed management of every state institution, a thing no one man can do. His duty and responsibility cease and ought to cease when he has appointed competent men to manage an institution. He should then turn it over to them and insist that they perform the duties assigned them in the interest of all the people and not from the standpoint of politics or prejudice. It is charged by the members of the board that Dr. Williams has never been subject to their control, that he felt himself the particular ward of the governor—responsible to him and not to the board whose duty it is to manage the affairs of the hospital.

This charge by the dismissed members of the board immediately raises the question, Who played politics? The members of the board or Dr. Williams? Instances are not lacking where a little "attention to details" by a large-visioned executive has been a mighty good thing for the institutions. The *St. Louis Republic*, one of the newspapers that strongly supported the movement in the last legislature to place all eleemosynary institutions under the control of a central board, declares the mazes of factionalism in St. Joseph are passed finding out and that the state hospital there "is nearly always a storm center of the political disturbances which, like the tornadoes in the West Indies, seem always to be coming, going, or present in that locality." It speaks of Dr. Williams as a competent official and can find no reason for the shake-up except "that it was due to 'factional politics in St. Joseph—the renewal of the old patronage row there,'" and suggests a remedy:

The people of the state, for and by whom the hospital is conducted, cannot understand why the management of the institution, whose sole purpose is the care and cure of the mentally afflicted, should be mixed up in the factional politics of St. Joseph.

It is too much to expect, perhaps, that politics ever will be "adjourned" at St. Joseph. Disregarding that, the state has two remedies at hand. One is to appoint men on the board who will have nothing to do with politics. The other is to have all the eleemosynary institutions managed by a central board, with headquarters at Jefferson City, which also should be free from political bias.

No class of citizens would more gratefully welcome the removal of these institutions from the political arena than the medical profession,

especially the organized medical profession as represented by the Missouri State Medical Association, and therefore we heartily indorse the *Republic's* suggestion of a central board of control, for the creation of which we have long labored in vain. In the meantime Dr. Williams will, we believe, if he can work unmolested by political interference, conduct the St. Joseph Hospital as efficiently as it is possible to do under our present system of managing state eleemosynary institutions.

THE NEW TEST

Some weeks ago Lt.-Col. Harris P. Mosher, in charge of the division of head surgery in the Surgeon-General's Office, visited the Base Hospital at Fort Hancock and expressed some thoughts on Americanism that took deep hold on the hearts of his hearers. Through the courtesy of our fellow-member and retiring president, Major Robert E. Schlueter, we have received a copy of Colonel Mosher's remarks. The appeal touches such a responsive cord in so many of our members that we publish it for the benefit of those who have not already read it. Colonel Mosher said:

A year this month our country has been at war. Each day is greeted with a new casualty list. The list is short, but with our men holding their bit of the line it must grow. To find one name there means for some family the full measure of sorrow and empty years to come. For twelve months the call for loyalty and service has been ringing through the land. It has fallen not only on quick ears, but on many that cannot or will not hear. It is not enough that your father or his father served his country. With their blood in your veins you should be rendering service now. Read the army lists. They are filled with foreign names. Their owners often put to shame for quick and full response those who claim long lineage on our soil. After twelve months of war each one of us must ask himself whether or not he is doing his full duty. The question cannot be evaded, because the call for service still rings clear. Have you given full service? Or have you made the most of the excuses always put forth in times like these by those content to let their brothers serve? Have you salved your conscience with part time service when full service would mean sacrifice for you or for your family? Remember that our allies no longer speak of service as a sacrifice but as a privilege. Are you still a spectator? Are you to take any part except in the cheering—if there is any—when the victory is won? Whatever your ancestry, whatever your name, the only test of Americanism is service. By this test all men are being silently judged. Its findings will be passed down in households to the end of this generation. Old friends and new must face it. A re-rating of the nation is in progress. Already in many instances the findings of the new test have caused astonishment and sadness. The test is forced on us. We cannot stop its relentless application—we cannot reverse its judgments. It is born of the agony of the world. From now on its findings will unite or divide every group in which men assemble for their daily occupations, and every family throughout the land.

THE VISITING NURSES ASSOCIATION

The work of visiting nurses is growing more popular and effective as the knowledge spreads among the people that this method of caring for the sick whose means preclude the employment of an all-time nurse, is very helpful to the patient and the family. The urgent call for nurses for the Army also makes it incumbent upon families with ample means to employ visiting nurses when the conditions permit. There are many cases where the attention of a nurse for an hour or two will assist the patient and the family to a surprising extent, not only contributing to the recovery of the sick one, but educating the well ones in the rules of hygiene and sanitation. The small fee charged by the visiting nurses bring them within the reach of practically every sick person who does not want to go to a city institution. The medical profession can most effectually spread this knowledge among the very class of people that most need it, and the Visiting Nurses Association of St. Louis therefore desires to announce to the profession that it is prepared to give nursing service to the sick in their homes. The fees range from 15c to \$1 per visit for patients able to pay. The office of the Association is in Room 238 Vanol Building; telephones, Lindell 1340, Delmar 575 and 1102; office hours, 8 a. m. to 5 p. m., except Sundays and holidays.

OBITUARY

JOHN M. BERRY., M.D.

WHEREAS, It has pleased the Almighty to remove from our presence our most revered and respected coworker, Dr. John M. Berry; therefore be it

Resolved, That we deeply deplore the death of our beloved brother; and be it further

Resolved, That in his death the medical profession has lost one of its most loyal and respected members, one of the oldest members of our County Society and a highly respected citizen, and that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society and sent to the JOURNAL of the Missouri State Medical Association and a copy sent to the wife of Dr. John M. Berry.

DR. L. W. CAPE,

DR. A. CONWAY,

DR. G. JONES,

Committee.

The St. Louis County Medical Society recently lost two of its members by death, one, Dr. E. J. Thurman, being the oldest member of the society and the other, Dr. J. M. Berry, one of the oldest members. The following resolutions were adopted by the society at a recent meeting:

ELIJAH J. THURMAN, M.D.

WHEREAS, It has pleased the Almighty to remove from our presence our most revered and respected coworker, Dr. E. J. Thurman; therefore be it

Resolved, That we deeply deplore the death of our beloved brother; and be it further

Resolved, That in his death the medical profession has lost one of its most loyal and respected members, the oldest member of our County Society and a highly respected citizen, and that in token of our esteem for our fellow member, these resolutions be incorporated in the minutes of our society and sent to the JOURNAL of the Missouri State Medical Association and a copy sent to the wife of Dr. E. J. Thurman.

WALTER S. WHEELER, M.D.

Dr. Walter S. Wheeler of Kansas City, a graduate of Jefferson Medical College, 1885, and former health commissioner of Kansas City, died at his home April 24, from heart disease, age 58. Dr. Wheeler was born in Winchester, Va., and came to Missouri at an early age when his parents located at Knob Knoster. Here Dr. Wheeler received his education at the county schools and at the Warrensburg normal and graduated from the University of Missouri. He then entered Jefferson Medical College and was graduated with honors. Dr. Wheeler's activities in medical society work were always directed to the improvement of medical conditions. He was deputy coroner of Jackson County and physician in charge of the department of contagious diseases soon after beginning practice in Kansas City. When Kansas City adopted a new charter the office of health commissioner was created, and Dr. Wheeler was appointed the first health commissioner by Mayor T. T. Crittenden, and was reappointed to this office by the succeeding mayors, D. L. Brown and H. L. Jost, serving in all a period of seven years. He inaugurated rigid inspection of milk and the medical inspection of school children. He was the first doctor to draw attention to the importance of open air schools for tuberculous children. In many other ways he impressed upon the people the importance and value of intelligent application of the developments in

medical sciences toward the prevention of diseases. He was a member of the Jackson County Medical Society, and served as its president and held other offices. He was also a member of the Missouri State Medical Association and a Fellow of the American Medical Association.

MEMBERSHIP CHANGES, JULY

NEW MEMBERS

Calvert, H. A., Smithville.
 Connor, L. J., Kirksville.
 Edwards, Franklin T., Keota.
 Elam, W. T., St. Joseph (re-elected).
 Nesbitt, E. P., Sheridan.
 Shank, W. L., Chicago, Ill.
 Stamey, James T., St. Joseph.

CHANGES OF ADDRESS

Robert Barclay, 3894 Washington Ave., to Humboldt Bldg., St. Louis.
 P. P. Burton, Greenville, to Louisiana.
 J. H. Duncan, Humboldt Bldg., to 4400 Lindell, St. Louis.
 Meyer J. Epstein, 538 Berlin Ave., to Washington Hotel, St. Louis.
 R. F. Fisher, 3854 Westminster Pl., to 400 Metropolitan Bldg., St. Louis.
 Henry Gettys, 3526 Washington Ave., to 515 Century Bldg., St. Louis.
 C. A. Gundelach, Lister Bldg., to University Club Bldg., St. Louis.
 Herbert H. Hagan, 408 Humboldt Bldg., St. Louis, to 6 Weissinger-Goulbert Bldg., Louisville Ky.
 Terry E. Lilly, 610 Lathrop Bldg., to 713 Lathrop Bldg., Kansas City.
 R. J. O'Reilly, 1023 N. Grand Ave., to 27 Washington Terrace, St. Louis.
 E. E. Pickens, Rialto Bldg., to 638 Lathrop Bldg., Kansas City.
 J. T. Redwine, McKendree, W. Va., to Princeton, W. Va.
 T. P. Scott, St. Joseph, Mo., to Carlyle, Ky.
 J. W. Shaw, 2420 N. Jefferson Ave., to 3505 N. Grand Ave., St. Louis.
 Edwin Shouse, Kansas City, to Lawson.
 D. E. Shy, Knobnoster, to Sedalia.
 Sam T. Smith, Poplar Bluff, to Neelyville, Mo.
 E. E. Souder, Freedom, to Ryors.
 Wm. H. Thaler, 1825 Carr, to 5101A Delmar St. Louis.
 J. H. Tinsley, Iconium, to Cleveland, Mo.

REINSTATED

J. P. Cavalier, Elk Creek.

TRANSFERRED

H. E. Dunlop, St. Louis, transferred from St. Louis M. S. to N. Y. M. S.

P. L. Gardner, Gallatin, transferred from Harrison County Medical Society to Davies County Medical Society.

DROPPED

H. P. Poston, Bonne Terre.

Louis E. Printy, St. Louis.

COMMISSIONS ACCEPTED IN MEDICAL
RESERVE CORPS OF THE ARMY
AND NAVAL RESERVE FORCE

Anderson, J. T., Kansas City.

Barnwell, R., St. Louis (Navy); Bertram, C. W., St. Joseph; Bokhof, D. H., Kansas City; Butler, J., Hawk Point.

Callaway, L. M., Kansas City (Navy); Clausen, S. W., St. Louis; Crawford, J. R., Kansas City.

Davis, J. J., Kansas City (Navy); Davis, L. L., St. Louis (Navy); Decker, A. J. E., Gray Ridge; Denmar, J. L., Kansas City (Navy); Denslow, F. M., Kansas City; Diehr, A. H., St. Charles.

Elders, G. W., De Soto; Goodman, S., Kansas City (Navy); Gregg, A. M., Joplin.

Hall, E. P., Kansas City (Navy); Hall, H. R., St. Louis; Haw, U. P. G., Benton; Hurford, P. G., St. Louis.

James, L. S., Blackburn.

Kaemmerling, G., Joplin; Kyger, F. B., Kansas City.

Leavy, C. A., St. Louis; Long, F. L., Farmington.

Maddox, J., Moberly; McAmis, L. C., St. Louis (Navy); Meads, E. L., Bonnots Mill; Moore, Sherwood, St. Louis (Navy); Morris, R. H., Linneus.

Osborne, F. J., St. Louis; Owens, P. H., Kansas City (Navy).

Paugh, P. G., St. Louis; Porter, A. L., Kansas City (Navy); Powers, H. C., Joplin; Presnell, C. C., Charleston.

Remley, G. C., Kansas City (Navy); Rosenberg, N., Kansas City; Rowe, W. G., Blue Springs (Navy).

Saenger, N., St. Louis; Sawyer, A. L., Fort Fairfield; Seabaugh, O. L., Cape Girardeau; Smith, A. J., Booneville.

Tarleston, F. S., St. Louis; Thomas, H. S., Kansas City; Thompson, W. G., Holden.

Underwood, A. M., Holstein; Upshaw, H. T., St. Louis.

Vieregg, F. R., Kansas City (Navy).

Will, L. A., St. Louis (Navy).

Young, J. H., Ozark; Young, J. S., St. Louis;

Zoglin, N., Kansas City.

OUR FIRST BLINDED SOLDIER

He Is Being Reeducated and Will Make Good

By SERGT. W. H. ZIMMERMAN, A. E. F.

You ask me to tell you how I lost my sight in France? Well, it was all over so quick that there is not much to tell.

To start at the beginning, I was born in Missouri but my parents moved to Texas where I went to

school until I was 16 years old. My parents are old now and they live in California, which we call home.

In 1910 I enlisted in the Army and a year later was ordered to the Philippines. I was there until 1915.

Now I do not like war, but you bet your life I love my country and when Uncle Sam needed men to go to France I could not get "over there" fast enough. And let me say right here that the worst part of being blind is that I have had to let someone else get the Germans I wanted. I do not hate them, oh, no! I just wanted to show them that we mean business and that no country can sink our ships and kill our women and kids without paying the price.

Well, I got to be sergeant in the ordnance and was in an "advance" station. I was detailed to bring up the stuff that was needed in an auto truck. One day when I was going in with a full load the truck skidded and went over into a shell hole upside down with me under it.

When they took me out they found my pelvis broken, some internal injuries and I was blind. I had a good constitution and I know it helped, but if it had not been for the surgeons and nurses I would never have told this story. The way they treated me was fine. The doctors just jollied me up and the nurses never stopped working until I was well. Oh, yes, they cut me up a little but when they did it I just had so much confidence that I knew I was coming out all right.

Well, one day one of the nurses brought a paper or something for me to see and the doctor had to tell me that I was blind. My first thought was, it's hard luck somebody's got to take my place and I've got to quit at this stage of the game; and then I made up my mind, as I had never been a drinking man and had lived a decent life, I had a good show of getting well.

I know now that I'll never see again, but I also know there is still a chance for me back in everyday life and I am fighting to make good. When I went over there I had a girl, so when I returned I made up my mind I would have to give her up. I didn't know that blind men could make a living. I always thought of them as selling lead pencils and shoe laces.

I came out here to Evergreen, the Army Blind Hospital School, and they told me about the preparations they were making to educate us blind fellows and how they were going to get good jobs for all of us if we would just work hard. You can bank on it, I made up my mind then and there that being blind was not half as bad as not making good, and I have been trying hard to learn to write on a typewriter and brush up on my English and spelling and things.

You see I have got to get a job now, because they sent for my girl to come down here to see me and she said, "Bill, if you make good I am going to marry you." Well, blindness is a handicap of course, but it's not going to stop me.

And you can believe it or not, but if I could see again I would go right back and get in the game. Of course, I do not want to die or anything like that, and yet if I had my choice I would take my chances fighting for my country. But so long as I cannot do that I am going to work so I can take the place of some other fellow who is able to fight. That is one way I hope to be able to help.

[The above is taken from *Carry On*, a new magazine issued from the office of the Surgeon-General of the Army for the special purpose of encouraging civilians to assist the injured soldier, especially the permanently disabled defender of our country, to reconstruct himself so that he may remain a useful citizen and not become a charge on the charity of the community. The first issue of *Carry On* contains a number of interesting articles. The magazine will be sent free of charge to anyone making the request, which should be addressed to the Surgeon-General of the Army, Washington, D. C.—Ed.]

HOW SIXTY-SIX U. S. SOLDIERS RISKED THEIR LIVES IN SUBMITTING TO TRENCH FEVER TESTS

The following statement is authorized by the Secretary of War:

A cablegram from the commanding general of the American Expeditionary Forces to the Secretary of War reports the success of a trench-fever investigation, which was made possible through the willingness of sixty-six American soldiers to risk their lives. The message contains the names and home addresses of the sixty-six men who submitted to inoculation. All of them now are either cured or convalescent.

SELECTED FROM VOLUNTEERS

These men were from field hospitals and ambulance organizations, units commonly designated as noncombatant. They were selected from a large group of volunteers as the healthiest and consequently the best able to withstand a long siege of trench fever, which has been one of the most baffling diseases which the allied armies have encountered. The men selected were sent to a hospital behind the British front line in January.

Trench fever is a disease which has been common on the western front. It may have existed before, but has not been either frequent or severe enough to direct the attention of the medical profession. Now it represents one of the greatest causes of disability in the allied armies. Nothing definite was known about either the cause or mode of spread of this disease.

SERIOUS BUT PROBABLY NOT FATAL

While it is probably never fatal by its nature, through frequent relapses and debilitating effects it may render a certain proportion of men permanently unfit for military service, and the approximate average time lost from this disease is six months. Therefore, in spite of the fact that it is not a fatal disease, from the military point of view it has been a serious one.

The problem of protecting our men, if possible, from this added suffering, was one of the first questions faced by the American Expeditionary Forces. Before any intelligent protective measure could be taken there were two points to be established. First, was this disease caused by germs? Second, if it was a germ disease how was it spread?

TESTS ON ANIMALS FAIL

Attempts were made to use animals to establish these points, but no animals susceptible to this disease could be found. Therefore, as was the case of Walter Reed and his work on yellow fever, it was necessary to resort to volunteers from our Army, who would be willing to sacrifice themselves that the many might be saved.

The first question studied was whether this was a germ disease. No germs could be seen with the microscope, but the Medical Department knew that there are numerous germs which cannot be seen by even the most powerful magnification. Therefore this point had to be established by taking blood from men with the fever and injecting it into healthy men. Out of thirty-four such individuals inoculated with blood or some constituent thereof, taken from seven cases of trench fever, twenty-three volunteers developed the disease. Out of sixteen healthy men inoculated with whole blood from a trench-fever case, fifteen developed the disease. These experiments prove that trench fever is a germ disease and that the germs live in the blood of men so infected.

SPREAD OF THE DISEASE

The next question was "how is this disease spread?" Naturally the body louse was to be considered first. Large numbers of these were collected from patients with trench fever and also some of the same kind were brought from England, which had been collected from healthy men. The lice from trench-fever cases were allowed to bite twenty-two men. Twelve of these later developed the disease, while four men bitten by lice from healthy men remained free from the disease. Eight other volunteers living under exactly the same conditions, in the same wards, but kept free from lice, did not develop trench fever. After blood inoculation the disease developed in from five to twenty days. After being bitten by infected lice the fever required from fifteen to thirty-five days to develop.

CLUE TO INTELLIGENT CONTROL

With these facts in hand, namely, that trench fever is a germ disease and that it is carried by lice, it is now possible to take up the question of controlling, in an intelligent manner, the disease. As long as the protection of the men from lice was only a matter of comfort and of no military importance, their extermination did not warrant extraordinary measures, but now that it is known that it is not simply a matter of discomfort, but that the "cootie" (trench vermin) is incidentally one of the largest causes of disability, it is deemed worthy of extraordinary efforts to control these pests. It is a repetition of the question of mosquito control, yellow fever having been eliminated on the Panama Canal by these means.

NO SMALL SACRIFICE BY MEN

It is no mean thing that these volunteers did in France. To face illness of weeks, with extreme suffering, requires peculiar valor. The average loss of weight for these men was from 20 to 25 pounds. Incidentally the hospital in which the experiments were carried out was shelled by the Germans in the early part of their March drive. It is believed by the Army Medical Corps that the sacrifice of this group of sixty-six men will in time lead to the protection of thousands of men from the ravages of trench fever.

ORDERS TO MISSOURI PHYSICIANS IN THE MEDICAL RESERVE CORPS

Allee, Capt. Gail D., Lamar, to Whipple Barracks, Ariz., for duty, from Fort Riley.

Atchison, Lieut. Cadwallader H., Waldron, to Camp Bowie, Fort Worth, Tex., for duty.

Baerens, Capt. Oscar F., St. Louis, to Camp Sherman, Chillicothe, Ohio, base hospital, from Camp Fremont.

Barnard, Lieut. Charles A., Portage de Sioux, to Camp Lewis, American Lake, Wash., for duty, from Fort Riley.

Bertram, Capt. Charles W., St. Joseph, to Fort Oglethorpe, for instruction.

Blakesley, Capt. Theodore S., Kansas City, to Houston, Tex., Signal Corps Aviation School, as flight surgeon, from Mineola.

Brashear, Lieut. Howard C., St. Louis, to Camp Travis, Fort Sam Houston, Tex., base hospital.

Brown, Lieut. Wilbur K., St. Louis, to Camp Devens, Ayer, Mass., base hospital.

Coleman, Lieut. Stephen R., St. Louis, to Fort Oglethorpe, for instruction.

- Colley, Lieut. Elijah A., St. Joseph, to Portland, Ore., Yeon Building, for duty, from Camp Dick.
- Connell, Lieut. Eyan S., Kansas City, to Camp Zachary Taylor, Louisville, Ky., for duty, from Camp Dodge.
- Coombs, Lieut. Miller O., Joplin, to Fort Thomas, Ky., for duty, from Fort Riley.
- Cooper, Capt. Calvin L., Kansas City, to Camp Custer, Battle Creek, Mich., base hospital, from Kansas City.
- Cooper, Capt. James F., Hannibal, to Camp Bowie, Fort Worth, Tex., for duty, from Fort Riley.
- Cullison, Lieut. Robert M., St. Louis, to Camp Travis, Fort Sam Houston, Tex., base hospital.
- Dahms, Lieut. Gustave, St. Louis, to Camp Travis, Fort Sam Houston, Tex., base hospital.
- Dargatz, Lieut. Fred E., Kansas City, to Camp Grant, Rockford, Ill., for duty, from Camp Custer.
- Davis, Lieut. Charles F., Kansas City, to Camp Jackson, Columbia, S. C., as orthopedic surgeon, from Chicago.
- Dearing, Lieut. Bradford F., St. Louis, to Camp Wadsworth, Spartanburg, S. C., base hospital, from Camp Jackson.
- Denslow, Capt. Frank M., Kansas City, to Camp McClellan, Anniston, Ala., base hospital.
- Diehr, Lieut. Alvin H., St. Charles, to Camp Meade, Annapolis Junction, Md., for duty.
- Dixon, Capt. Elliott K., St. Louis, to Cape May, N. J., base hospital, from Camp Dodge.
- Downing, Lieut. James L., Oak Grove, to Fort Sill, Okla., base hospital, from Fort Oglethorpe.
- Duckworth, Lieut. William H., St. Clair, to Fort Oglethorpe, for instruction.
- Ebeling, Lieut. Albert W., Warrenton, to Fort Oglethorpe, for instruction.
- Elam, Capt. W. R., St. Joseph, to Camp Wadsworth, Spartanburg, S. C., base hospital, from Rockefeller Institute.
- Elders, Lieut. George W., Ware, to Fort Oglethorpe, for instruction.
- Fair, Lieut. Shields W., Belton, to Fort Oglethorpe, for instruction.
- Ferris, Lieut. David P., St. Louis, to Camp Jackson, Columbia, S. C.
- Fleisher, Capt. Moyer S., St. Louis, to Hoboken, N. J., for duty, from Camp Wadsworth.
- Glenmon, Capt. William P., St. Louis, to Fort McPherson, Ga., for duty.
- Goldman, Lieut. Max, Kansas City, to Camp Pike, Little Rock, Ark., base hospital.
- Harrington, Lieut. George L., Independence, to Camp Fremont, Palo Alto, Calif., with the board examining the command for nervous and mental diseases.
- Hecker, Capt. Charles H., St. Louis, to Walter Reed General Hospital, Takoma Park, D. C., for duty, from Camp Greene.
- Hines, Lieut. William H., Kansas City, to Fort Oglethorpe, for instruction.
- Hoxsey, Lieut. Thomas T., St. Louis, to Fort Oglethorpe, for instruction.
- Hughes, Capt. Marc R., St. Louis, to report to the commanding general, Philippine Department, for duty, from Jefferson Barracks.
- Hynes, Capt. Joseph C., St. Louis, to Douglas, Ariz., for duty, from Camp Travis.
- James, Lieut. Frank, Sheldon, to New Haven, Conn., for duty.
- Kaemmerling, Lieut. Gerhard, Joplin, to Fort Oglethorpe, for instruction.
- Kirby, Lieut. Alexander C., St. Louis, to Camp Jackson, Columbia, S. C.
- Kirkham, Lieut. Arch, Orrick, to Fort Oglethorpe, for instruction.
- Kyger, Lieut. Fred B., Kansas City, to Fort Riley, as a member of the board examining the troops for cardiovascular disease.
- Latham, Lieut. Logan L., Latham, to Fort Sam Houston, Tex., for duty, from Camp Shelby.
- Lewis, Lieut. Benjamin W., St. Louis, to Army Medical School, Washington, D. C., for instruction.
- Link, Lieut. Edward X., St. Louis, to Orona, Me., for temporary duty in connection with the examination of drafted troops at the University of Maine, and on completion to his proper station, from Camp Devens.
- Long, Capt. Frank L., Farmington, to Camp Dodge, Des Moines, Iowa, for duty.
- Long, Capt. Levi S., St. Joseph, to report to the commanding general, Philippine Department, for duty from Fort Riley.
- Mackey, Lieut. Dudley F., Clayton, to Hoboken, N. J., for duty, from New York City.
- Macklin, Lieut. Lurin P., St. Louis, to Camp Beauregard, Alexandria, La., base hospital.
- Maddox, Lieut. Jesse, Moberly, to Camp Travis, Fort Sam Houston, Texas, for duty.
- Matlock, Lieut. Wallace E., Kennett, to Fort Oglethorpe, for instruction.
- Maxwell, Lieut. Herbert S., Hopkins, to Camp Zachary Taylor, Louisville, Ky., base hospital.
- McAlester, Capt. Andrew W., Kansas City, to Mineola, L. I., N. Y., Signal Corps Aviation School, for duty.
- McComas, Capt. Arthur R., Sturgeon, to report by wire to the commanding general, Central Department, for assignment to duty.
- McGennis, Lieut. Patrick, St. Louis, to Camp Zachary Taylor, Louisville, Ky., base hospital.
- McKay, Lieut. Hugh G., Bangor, to Camp Devens, Ayer, Mass., base hospital.
- McKenzie, Lieut. Ernest M., St. Louis, to Camp Meade, Annapolis Junction, Md., for duty, from Fort Oglethorpe.
- Meads, Lieut. Ezra L., Bonmots Mill, to Fort Oglethorpe, for instruction.
- Meneffee, Lieut. Charles D., Perry, to Fort Oglethorpe, for instruction, from Dallas.
- Miller, Lieut. Eugene A., St. Joseph, to Camp Crane, Allentown, Pa., for duty, from Cleveland.
- Mitchell, Lieut. William F., St. Louis, to Camp Gordon, Atlanta, Ga., for duty, from Camp Wheeler.
- Muench, Capt. Otto L., Washington, to Camp Lewis, American Lake, Wash., for duty, from Fort Riley.
- Murphy, Lieut. John H., St. Louis, to Army Medical School, for instruction, from Camp MacArthur.
- Newell, Lieut. Quitman U., St. Louis, to Camp Zachary Taylor, Louisville, Ky., for duty, from Camp Wadsworth.
- Nickell, Capt. Luther O., Macon, to New York City, Hospital for Ruptured and Crippled, for instruction, from Chicago.
- Niedringhaus, Capt. Ralph E., St. Louis, to Colonia, N. J., for temporary duty, from Camp Doniphan.
- O'Kelley, Lieut. Henry T., Patton, to Camp Logan, Houston, Texas, for duty, from Fort Riley.
- Ozias, Lieut. Charles H., Kansas City, to Camp Dodge, Des Moines, Iowa, for duty, from Army Medical School.
- Parker, Lieut. Harry F., Warrensburg, to Camp Sevier, Greenville, S. C., as orthopedic surgeon, from Chicago.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Patterson, Capt. William T., Shelbina, to Camp McClellan, Aniston, Ala., base hospital, from Fort Porter.

Paugh, Capt. Phreborn G., St. Louis, to New Haven, Conn., for duty.

Peacock, Lieut. Kenneth C., St. Louis, to Fort Oglethorpe, for instruction.

Pennington, Lieut. George B., West Alton, to Camp Lewis, American Lake, Wash., for duty.

Pierce, Lieut. Lincoln J., Independence, to Fort Oglethorpe, for instruction.

Platte, Lieut. Richard B., Kansas City, to Camp Travis, base hospital, Fort Sam Houston, Texas, from Fort Riley.

Powers, Capt. Herbert C., Joplin, to Camp Pike, Little Rock, Ark., for duty.

Presnell, Capt. Charles C., Charleston, to Camp Pike, Little Rock, Ark., for duty.

Sewell, Lieut. Minor F., Malta Bend, to Fort Oglethorpe, for instruction.

Sharpe, Capt. Norvelle W., St. Louis, to Portland, Ore., Yeon Building, for duty, from Lake Charles, La.

Simon, Capt. Frederick C., St. Louis, to Hampton, Va., Signal Corps Aviation School, as flight surgeon, from Mineola.

Smith, Lieut. Arthur J., Boonville, to Camp Travis, Fort Sam Houston, Tex., for duty.

Stewart, Lieut. John W., St. Louis, to Cape May, N. J., base hospital, from Camp Lee.

Stone, Capt. Charles A., St. Louis, to Fort Oglethorpe, for instruction.

Suggett, Capt. Orril L., St. Louis, to Camp Jackson, Columbia, S. C., from Camp Sherman.

Tarr, Lieut. Gough H., Poplar Bluff, to Camp Lewis, American Lake, Wash., for duty.

Telfer, Lieut. George A., St. Louis, to Fort Oglethorpe, for duty.

Thomas, Lieut. Hollis S., Kansas City, to New Haven, Conn., for duty.

Thompson, Lieut. William G., Holden, to Kansas City, Mo., Swcney Auto School and the Rahe Tractor School, to make physical examinations and give medical attention to the drafted men to be enrolled at these institutions.

Timberman, Lieut. John H., Marston, to Montgomery, Ala., Signal Corps, Aviation School, as flight surgeon, from Mineola.

Upshaw, Lieut. Harry S., St. Louis, to Camp Dodge, Des Moines, Iowa, for duty.

Urbanowski, Lieut. Leon V., St. Louis, to Camp Custer, Battle Creek, Mich., as orthopedic surgeon, from Chicago.

Vaughn, Lieut. Florian, Shelbina, to Camp Travis, Fort Sam Houston, Tex., for duty.

Vosburgh, Capt. Charles A., St. Louis, to Camp Gordon, Atlanta, Ga., for duty, from Fort Oglethorpe.

Weaver, Capt. John S., Kansas City, to Fort Sam Houston, Tex., for duty, from Camp Travis.

Wessling, Lieut. Alfred L., Martinsville, to Portland, Ore., Yeon Building, for duty, from Lonoke.

Wolfermann, Lieut. Sidney J., St. Louis, to Army Medical School, for instruction, from Hoboken.

Cohen, Lieut. Felix, Kansas City, honorably discharged, on account of physical disability existing prior to entrance into the service.

Woltzen, Capt. Samuel W., Clinton, honorably discharged, on account of physical disability existing prior to entrance into the service.

Woody, Lieut. Charles E., Springfield, resignation accepted.

Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.

Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.

Carter-Shannon County Medical Society, Jan. 9, 1918.

Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.

St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.

Henry County Medical Society, Jan. 24, 1918.
 Moniteau County Medical Society, Jan. 28, 1918.

Camden County Medical Society, Feb. 1, 1918.
 Scott County Medical Society, Feb. 2, 1918.

Cedar County Medical Society, Feb. 8, 1918.
 Clark County Medical Society, Feb. 8, 1918.

Cooper County Medical Society, Feb. 13, 1918.
 Atchison County Medical Society, Feb. 18, 1918.

Ralls County Medical Society, March 10, 1918.
 Pulaski County Medical Society, March 11, 1918.

Pemiscot County Medical Society, March 25, 1918.
 Cape Girardeau County Medical Society, March 28, 1918.

Vernon County Medical Society, March 28, 1918.
 Putnam County Medical Society, April 11, 1918.

Cass County Medical Society, April 13, 1918.
 Laclede County Medical Society, April 15, 1918.

Clay County Medical Society, May 2, 1918.
 Newton County Medical Society, May 2, 1918.

Jefferson County Medical Society, May 8, 1918.
 Pettis County Medical Society, May 11, 1918.

Johnson County Medical Society, May 31, 1918.
 Macon County Medical Society, June 24, 1918.

Gentry County Medical Society, July 11, 1918.
 Daviess County Medical Society, July 15, 1918.

WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fifty-First Meeting—May 13, 1918

1. TRENCH FEVER.—By DR. E. L. OPIE.

Since the beginning of the war in Europe fevers of unexplained origin have been common in the Allied Armies. From this group of fevers the disease now known as Trench Fever was first separated by Graham in 1915. This disease in typical instances is characterized by periodic paroxysms of fever occurring at intervals of approximately five days, by transient pains over the shins and elsewhere, by skin spots resembling the rose spots of typhoid fever, and in many instances by enlargement of the spleen.

McNee, Brunt and Renshaw showed that the disease could be transmitted from man to man by inoculation of whole blood, and of red blood corpuscles. They did not find the virus in the blood plasma. The parasite which causes the disease has not been discovered and some observers have maintained that the disease is modified typhoid or para-typhoid fever in individuals immunized by inoculation. The possibility that the disease is transmitted by the bite of the louse has been much discussed, and one experiment by Daves and Weldon has tended to confirm this relation, but the view that lice transmit the disease has not been widely accepted.

An investigation of the transmission of this disease has been made by a commission consisting of Majors Strong, Opie and Swift; Captains Baetjer, MacNeal, Pappenheimer and Lieutenant Peacock. They have been assisted by volunteers from the American Army in France. This commission has shown that the disease may be reproduced almost constantly by inoculation with whole blood, with blood plasma and with red blood corpuscles. The inoculation period is usually five or six days, but may be somewhat longer. Blood plasma diluted and passed through a Berkeley filter fails to reproduce the disease. In twenty-two instances lice which have fed on patients with trench fever have been permitted to bite volunteers. In fourteen instances typical trench fever has been reproduced. Volunteers who have been bitten by infected lice, and volunteers who have been unbiten but have lived with those who acquired the disease, have remained without fever. Trench fever has in most instances appeared in nineteen or twenty days after the first bite of infected lice. The observations indicate that the disease may be prevented by the destruction of lice.

DISCUSSION

DR. DOCK: I am sure we all appreciate the benefit and privilege of hearing of this interesting subject, and those who struggled with the literary evidences of trench fever in the medical journals, as some of us did last year in the class, realize the enormous advantage of hearing directly from someone who has been on the ground and has taken part in the actual experimental work. I think it would spoil the effect to discuss the details now given us.

DR. HURFORD: I would like to ask if there is any leukocytosis in trench fever.

DR. DOCK: Is there any suggestion as to the nature of the infected material?

DR. ROBINSON: Is there any specificity of species of lice such as obtains in the mosquito conveying malaria?

DR. STONE: Have you tried any other insect?

DR. BURROWS: I would like to ask if any immunity develops and whether one may have a second attack.

MAJOR OPIE, closing: Yes, there is a leukocytosis evident at the time of the paroxysm. Leukocytosis may be ten to fifteen thousand, involving, I have been informed, particularly the polynuclear leukocytes; toward the end of the disease there may be some increase of mononuclear cells.

Of course, incidentally, the commission searched for parasites. We employed for inoculation a certain amount of blood in which the virus was demonstrable by its effects. The virus did not pass through the filter as far as these observations determined. No organisms were found.

Body lice, it is well known, are very common among soldiers. *Pediculus capitis* is uncommon, so that there is very little probability that *Pediculus capitis* has

an important part in the transmission of the disease. *Pediculus pubis* is much more common. No experiments have been performed with it. Since *Pediculus pubis* is far less common than *Pediculus corporis*, it is probable that *Pediculus pubis* is little if at all concerned in the transmission.

No experiments were made with other insects. Of those which might be considered, bed-bugs are uncommon in the quarters of the soldiers, and its significance in the actual transmission of the disease may be excluded.

The disease may continue for a considerable period. Indeed, there are those who believe that it may remain like malaria latent in the body, recurrences occurring, it is said, after considerable periods, six months or more. Some individuals are said to have had more than one attack, but these attacks may have been recurrences. It is not definitely known as to how much or how little immunity is produced.

2. OBSERVATIONS ON HEREDITARY SYPHILIS OF THE "EARLY" TYPE.—By DR. PHILIP C. JEANS.

Forty-one infants having manifestations of hereditary syphilis were studied in regard to the incidence of involvement of the central nervous system. Based on the examination of the cerebrospinal fluid the cases were divided into three groups. There were sixteen cases (39 per cent.) having undoubted evidence of syphilitic involvement of the nervous system, eight of which also had clinical manifestations, such as convulsions, hemiplegia, hydrocephalus, etc. Nine of the forty-one cases presented doubtful evidence and sixteen cases were classed as having no evidence of nervous involvement. The evidence in the "positive" cases consisted of a strongly positive Wassermann reaction in every case as well as increase in the globulins and cells and a colloidal gold reduction in the "syphilitic zone."

No other statistics of nervous involvement in syphilis in infancy are known to the writer. From these data it would seem that there is practically the same incidence of nervous involvement in "early" as is found in "late" hereditary syphilis. In one rather large series in older children we found 33 per cent. and more recently in a smaller series nearly 50 per cent. with nervous involvement. According to various investigators one finds conspicuous changes in the spinal fluid in from 25 to 40 per cent. of cases of early acquired syphilis showing that the incidence of nervous involvement is not very different in early hereditary syphilis from that found in early acquired syphilis. It is also noted that in the majority of the cases of infantile syphilis with nervous involvement the nervous lesions are rather readily reached by effective general therapy, so that in but few cases does intraspinal treatment seem necessary.

DISCUSSION

DR. DOCK: I was very much interested in Dr. Jean's remarks about fever and I think what he stated about quite in line of what we know of syphilis in older patients. One thought occurred to me while he was talking. We see a good many cases in internal medical work in which there are children in the families of syphilitic fathers who do not show syphilis. Very often one thinks they must have been infected. In many cases we have a negative Wassermann, in such children. I would think it very interesting to follow up the children and see how they act year after year. It may be that some of those children had early syphilis.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in regular session Thursday afternoon, June 27, 1918, in the Court Room at Butler. The following members were in attendance: Drs. S. L. Bates and T. B. Todd of Adrian, Stepp of Ballard, H. A. Rhoades of Foster, W. A. Williams of Hume, J. M. Smith of Amoret, Chastain, Berry, Lockwood, Boulware, Crabtree, and Newlon of Butler.

The meeting was called to order by the president, Dr. S. L. Bates. The minutes of the last meeting were read and approved.

The subject of autointoxication from intestinal stasis was generally discussed as outlined in the program. Dr. E. N. Chastain opened the discussion, followed by Dr. G. W. Berry, who reported a very interesting case in connection with his discussion. All other members present took an active part in the discussion.

Dr. T. B. Todd of Adrian reported an interesting case of retention of urine from enlarged prostate in which a trocar was used to empty the bladder. The case was sent to hospital.

Dr. E. N. Chastain moved the resolution adopted by the House of Delegates at the State Meeting in Jefferson City, May 6-8, to pay state assessment for members now in the service be adopted by the Bates County Medical Society. Motion carried.

The following resolution was adopted at the first reading:

WHEREAS, We as a Nation are now at war with Germany, and

WHEREAS, All diplomatic relations between this country and Germany have been indefinitely withdrawn, pending the ultimate outcome of the war, and

WHEREAS, The social and political dignity and integrity of this Nation has been ruthlessly assailed by Germany in her extreme efforts to gain world-wide dominion over and in all things vital and otherwise therefore be it

Resolved, That we, as members of the Bates County Medical Society, on this day, June 27, 1918, solemnly pledge ourselves not to buy, use or accept any drug, remedy, instrument, apparatus, appliance or anything whatsoever used in the treatment of the sick now, heretofore or hereafter made in Germany or bearing the stamp or trademark of that country for a period of not less than fifty years and as long thereafter as may please the honor of the medical profession of this, our grand old America.

It was moved by Dr. T. F. Lockwood that the above resolution be inserted in the county papers, motion carried.

With no other business the society adjourned to meet Sept. 26, 1918, unless sooner convened by order.

J. S. NEWLON, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

Cape Girardeau County Medical Society held its regular monthly meeting at Cape Girardeau July 8, with the following present: Drs. Seibert, Vinyard and Hays of Jackson; Dr. Blaylock of Pochontas, and Drs. Hope, Howard, Wichterich, Wilson, Seabaugh and Cunningham of Cape Girardeau. Dr. Murphy of Cape Girardeau and Dr. Bowman of Appleton, visitors.

Dr. O. A. Seabaugh read an interesting and instructive paper on Ectopic Pregnancy, which brought out a good discussion.

Dr. Wilson made a talk on life insurance examination, touching especially on the status of the blood pressure in relation to the risk.

Dr. E. H. G. Wilson, for many years the efficient

secretary of the society, tendered his resignation because of orders to report July 18 for service in the Medical Reserve Corps of the Army.

Dr. H. L. Cunningham was chosen to fill the office of secretary

H. L. CUNNINGHAM, M.D., Secretary.

DAVISS COUNTY MEDICAL SOCIETY

A regular meeting of the Daviess County Medical Society was held at Pattonsburg, June 25. After the doctors did justice to an elegant 6 o'clock dinner, served by Mrs. J. D. Dunham, a lively, entertaining and instructive meeting followed. Dr. C. R. Woodson of St. Joseph was present and after carefully examining the clinics presented to him by Drs. Dunham, Reich and Wetzel, he delivered a masterful address on "Central Lesions," which covered the location, cause and treatment of the different kinds of paralysis. Dr. Woodson is a very eloquent and forceful speaker and his address was much enjoyed by all. Those present were Drs. Woodson, Dunham, Reich, Hanna, Doolin, McClung, Wetzel, Willis and Leslie Dunham of St. Louis. The following new doctors have recently registered in Daviess County: Dr. J. L. Reich of Altamont; Dr. J. B. Willis of Pattonsburg, and Dr. P. L. Gardner of Gallatin. Dr. Reich has presented credentials and has been passed on by membership committee and will be voted on by the County Society at the next regular meeting to be held in Jameson on Tuesday evening, October 8.

N. M. WETZEL, M.D., Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in the Circuit Court room, Vienna, Maries County, at 2 o'clock in the afternoon. Dr. J. O. Cooper, president of the society presided at the meeting. The minutes of the previous meeting were read and approved.

The following doctors were present and participated in the proceedings: J. O. Cooper and Lieut. Lockwood of Linn; J. B. Underwood, High Gate; F. J. Wessling, Freeburg; Charles L. Klenk, St. Louis; H. G. Isenberg, Vancleave; O. H. Jones, Vichy; J. J. Rademacher, Argyle, James McCulley, Dixon; A. J. Crider, Brinktown; John S. Enlow, Bay.

On motion of Dr. F. J. Wessling it was decided to have the next meeting of the society on Thursday, Sept. 26, 1918, and that the same be like heretofore, an afternoon and a night session.

The meeting then took action on the application of Dr. A. F. Bugg, a member in good standing, which applicant asked to be transferred to the Reynolds County Medical Society. The application was granted and Dr. Bugg was given his transfer card.

Dr. W. R. Ferrell brought in two clinics which were examined and their condition discussed and proper treatment prescribed.

Dr. Charles L. Klenk read his paper on serum therapy. This paper was very instructive as it described in detail how the various vaccines and serums should be made and how they should be applied. The paper was necessarily very lengthy and exhaustive and the discussion therefore was drawn out until it was time for supper when the doctors divided into two groups and went to the hotels for a bounteous repast paid for by the citizens of Vienna.

At the night session Dr. J. S. Enlow of Bay, presided and introduced the various speakers, all of whom spoke along lines of public health and the preservation of child life. The speeches seemed to be highly appreciated as the laymen will better understand that the doctors meet for their edification and exchange of ideas.

JOHN D. SEBA, M.D., Secretary.

GRUNDY COUNTY MEDICAL SOCIETY

Grundy County Medical Society met at 8 p. m. in the parlors of the Elk Club Building, June 7, 1918. The president, Dr. J. A. Asher, presiding. The following members were present: Drs. W. H. Winningham, E. A. Duffy, J. B. Wright, T. E. Moore, B. E. Sheetz, D. Doan, O. R. Rooks, J. A. Asher, all of Trenton; C. H. Cullers of Spikards, and E. J. Mairs of Laredo. The following program was rendered:

The Tonsils, by Dr. J. B. Wright, Trenton. Delegate's Report, by Dr. E. J. Mairs, Laredo, after which a buffet luncheon was partaken of.

Lively interest was manifest in the discussion of the papers; also of war topics affecting medical men.

There being no further business the society was adjourned.

O. R. Rooks, M.D., Secretary.

HOLT COUNTY MEDICAL SOCIETY

The regular quarterly meeting of the Holt County Medical Society was held at Craig, June 27. The members of the Atchison County Medical Society having been invited to meet with us, several were present.

Dr. Osborn, president of the society, called the meeting to order and then requested Dr. Postlewait of Tarkio, president of the Atchison County Society, to preside. Dr. Postlewait took charge and conducted the meeting in a manner which proved him to be an able executive. In addition to the members in attendance from Atchison county were three prominent members from the Buchanan County Medical Society—Drs. C. R. Woodson, C. H. Wallace and H. W. Carle. Each of these gentlemen delivered an address. Dr. Woodson's subject was "Cerebral Hemorrhage, Embolism and Thrombus"; Dr. Wallace, a member of the Medical Board of the Council of National Defense, told us our duty in the war, and the way we should go about it. Dr. Carle also spoke along patriotic lines. Dr. Wallace, later, further explained much that was not well understood by physicians who have not seen service in the Medical Reserve Corps.

A vote of thanks was given Dr. Wallace in respect for his patriotic address.

Drs. C. L. Evans, F. E. Bullock and J. M. Davis were elected a committee to gather information from the members, that they may know whom to select to fill the quota from Holt county, which has been called for the Medical Reserve. They were chosen to serve in this capacity owing to the fact that they are not eligible to enlist, all having passed the age limit.

A resolution was passed whereby it becomes incumbent on the society to raise a fund of \$1,000, which is for the purpose of helping to meet the expense of equipping those members of the society who may enlist. The money is to be raised by an assessment on the members who remain at home. The quota called from Holt county is six.

Next regular meeting of the society will be at Oregon, Oct. 3, 1918.

J. F. CHANDLER, M.D., Secretary.

MERCER COUNTY MEDICAL SOCIETY

The Mercer County Medical Society was called at a special meeting at Princeton, July 12, 1918. All members who are now living in the county were present.

After a discussion as to whether the society should pay the dues of those in the service, a motion was made and carried that the society would allow each of its members in the service of the U. S. Army his portion of the county society dues only and said mem-

bers to pay that portion which is sent to the state medical association.

The application of Dr. N. A. Smith of Princeton, was read and Dr. Smith was voted into membership.

Mercer County has a greater percentage of its medical population already in the service than any other county in the state of Missouri, there being six now in the Medical Reserve Corps of the U. S. Army and four others have taken the examination. The balance of the profession have filled out application blanks and filed them with the secretary of the county medical society for him to send to the proper place as soon as the profession of the adjoining counties who are all far behind Mercer County, show a disposition to do their duty.

C. P. PICKETT, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session July 9, 1918, at Downing. Members present were: Drs. W. H. Sieber of Queen City; B. B. Potter, W. A. Potter, J. H. Keller of Lancaster; H. E. Gerwig, A. J. Drake and J. B. Bridges of Downing. The meeting was called to order by President B. B. Potter and the following business was transacted:

The minutes of the last meeting were read and approved.

A communication from the state secretary concerning the Owen-Dyer bill was read and discussed and by a unanimous vote of the society the secretary was ordered to write our senators and Congressman M. A. Romjue, and ask them to support the measure.

A communication from the state secretary concerning the dues of the members who are in the Medical Reserve Corps, and by a vote of the members it was determined to excuse all such members from paying dues during their services in the war.

Program: The subject for this meeting was "Ade-noids." A clinic was present and Dr. W. H. Sieber was in charge of the subject; he illustrated and exemplified the disease in its several stages with models. It was a very interesting subject and was highly appreciated by the members.

Capt. W. A. Potter who has been at Camp Funston since May 10, is home on a furlough and was present and gave a talk on Army life and expressed himself as being well pleased with his work. He will return to Camp Funston July 10.

There being no further business the meeting closed to meet at Lancaster, September 4.

J. B. BRIDGES, M.D., Secretary.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its regular quarterly meeting at Fordland, Wednesday, June 19. The meeting was called to order at 10 a. m., in the beautiful home of Dr. Good, by the president, Dr. Schlicht.

Drs. Highfill, Sayers, Rabenau, Good, Trimble, Bruton, Bollinger, Schlicht and Williams responded to the roll call. Visitor, Dr. Werner. The report of the last meeting at Niangua was read by Dr. Highfill, the secretary, and approved.

On motion of Drs. Trimble and Seymour and seconded by Dr. Good of Fordland, that all physicians in Webster County Medical Society between the ages of 21 and 55 place their names in a hat, and have them drawn out by three physicians too old for military service, and that they go for service in order drawn out. The motion carried and the following names were written on cards and placed in a hat: Drs. Werner, Bailey, Adkins, Schlicht, Bruton, Sayers, Jackson and Trimble.

The hat was then shaken up by Dr. Highfill. Dr. Good closed his eyes and drew out the cards, handed them to Dr. Williams, who read off the names and numbers of the cards as they were drawn out. They were drawn out in the following order and the physicians are to go for service in the order drawn: Drs. Werner, Schlicht, Bruton, Sayers, Adkins, Jackson, Trimble and Bailey.

The meeting then adjourned for dinner, and to meet at the Baptist Church at 2 o'clock. The society was served an excellent dinner by the Fordland Hotel.

The meeting was called to order at 2 p. m. at the Baptist Church, by the president, Dr. Schlicht.

Mr. C. C. Sherman welcomed the physicians of Webster County to the generous little city of Fordland, and made us all feel at home.

Dr. Bruton read a very interesting paper. Mrs. Lee highly entertained us with a reading, which was very appropriate to the physicians at this time.

The young ladies of the Baptist Church rendered some excellent music. Lawyer McDowell gave us a very interesting talk on the War and Democracy. Dr. Highfill made a splendid talk on the physician and his patriotism.

The meeting closed to meet at Seymour the third Wednesday in September, a business meeting to be at 10 a. m., and a public meeting at 1 p. m.

The members of the Webster County Medical Society wish to thank Drs. Good and Rabenau and especially the young people of Fordland who helped entertain us so royally, as we all went home feeling that the day spent in Fordland would be long remembered by the physicians and their families.

M. HIGHFILL, M.D., Secretary pro tem.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

ANTIPNEUMOCOCCUS SERUM.—A serum obtained from horses immunized with virulent pneumococci. Each lot of antipneumococcic serum is submitted by the manufacturer to the U. S. Hygienic Laboratory for potency test. Early massive (from 50 to 10 Cc.) intravenous doses of a highly potent serum prepared from the type of pneumococcus present in the case to be treated are necessary. The serum used should be obtained from an animal immunized with pneumococci of the type corresponding to that present in the special case under treatment. Thus far Type I serum alone seems to be on reasonably secure clinical grounds.

ANTIPNEUMOCOCCUS SERUM, TYPE I, LEDERLE.—Marketed in a pressure syringe containing 50 Cc. Schieffelin and Co., New York.

ANTIPNEUMOCOCCIC SERUM, TYPE I, P. D. & Co.—Marketed in a piston syringe containing 50 Cc. Parke, Davis & Co., Detroit.

ANTIPNEUMOCOCCIC SERUM, TYPE I, SQUIBB.—Marketed in vials containing 50 Cc. E. R. Squibb & Sons, New York.

ACID. PHENYL CINCH.-MORGENSTERN.—A brand of phenylcinchoninic acid, U. S. P. It is sold as Tablets Acid. Phenylcinch.-Morgenstern containing 0.5 gm. acid. phenylcinch., and as Sodium Phenylcinch.-Water-Morgenstern, a solution of sodium phenylcinchoninate containing sodium bicarbonate and sugar

and representing the equivalent of 1 gm. acid. phenylcinch.-Morgenstern per fluidounce.

PROCAINE-RECTOR.—A brand of procaine complying with the N. N. R. standards. Procaine is the substance which was first introduced as "novocaine." The Rector Chemical Co., Inc., New York.

BARIUM SULPHATE-BRADY FOR ROENTGEN-RAY WORK.—A brand complying with the N. N. R. standards for barium sulphate for Roentgen-ray work. Geo. W. Brady & Co., Chicago (*Jour. A. M. A.*, June 1, 1918, p. 1599).

ANTIPNEUMOCOCCIC SERUM, TYPE I, CUTTER.—Marketed in vials containing 50 Cc. Cutter Laboratory, Berkeley, Calif.

ANTIPNEUMOCOCCIC SERUM, TYPE I, MULFORD.—Marketed in double ended vials containing 50 Cc. H. K. Mulford Co., Philadelphia.

ANTIPNEUMOCOCCIC SERUM, POLYVALENT, MULFORD.—Prepared by immunizing horses with dead and living pneumococci of the three fixed types (Types I, II, III). Marketed in double ended vials containing 50 Cc. each, with sterile needle and tubing for intravenous injection. H. K. Mulford Co., Philadelphia (*Jour. A. M. A.*, June 22, 1918, p. 1923).

PROPAGANDA FOR REFORM

SODIUM VERSUS POTASSIUM.—When the embargo was declared on Germany, the price of potassium salts in this country began to soar. Now steps are being taken for the production of potassium in this country. In the meantime the plentiful sodium salts may, in most cases, be used instead. There is no evidence that potassium salts are superior therapeutically to sodium salts, and they are very much cheaper. Sodium acetate, sodium bicarbonate, sodium bromid, sodium chlorate and sodium hydroxid are among the sodium salts which may with advantage replace the corresponding potassium salts (*Jour. A. M. A.*, June 1, 1918, p. 1601).

MISBRANDED NOSTRUMS.—The following preparations have been investigated by the Federal authorities and their proprietors convicted of misbranding under the Federal Food and Drugs Act: Dr. Swan's Liver and Kidney Remedy, containing alcohol, sugar, glycerin, sodium salicylate, strychnin and some laxative plant drug, with indications of juniper. —Stuart's Calcium Wafers, containing strychnin, despite the claim that it contained no poisonous ingredient. —Turpentine Man's or Tyding's Remedy, a glucose sirup containing potassium iodid, alcohol and traces of salicylic acid, phosphates, calcium and alkaloids. —Henry's Red Gum Compound, containing heroin, chloroform, alcohol, glycerin and sugar. —Athlophoros, a solution of glycerin, sodium salicylate, oil of cinnamon and water. —Dr. Thatcher's Cholera Mixture, containing alcohol, morphin, a laxative drug, sugar and aromatics. —Dr. Thatcher's Amber Injection, containing alcohol, opium and zinc sulphate to which acetic acid had been added. —Abbott Bros. Rheumatic Remedy, containing 24 per cent. alcohol with 5 grains potassium iodid to each teaspoonful with extracts of drugs such as sarsaparilla and dandelion (*Jour. A. M. A.*, June 1, 1918, p. 1624).

ORCHIS EXTRACT.—A post office fraud order has been issued against Fred A. Leach, doing business as the Packers Product Company, Chicago. The business which the post office has declared a fraud consisted in the sale of Orchis Extract, claimed to be a remedy for lost sexual powers, etc. The Federal chemists found that Orchis Extract tablets consisted of milk sugar, orchitic animal tissue, and agents used in compressing the tablets (*Jour. A. M. A.*, June 8, 1918, p. 1786).

CARE IN ADMINISTERING ARSPHENAMINE.—More than the ordinary severe reactions from arsphenamine have been reported lately; hence there is need of special care at the present time in the administration of arsphenamine. The question may justly be raised if it is wise to repeat the administration at very short intervals. There also are indications to suggest the wisdom of beginning with small doses. Also, while heat may be used in dissolving the arsenobenzol brand of arsphenamine, it should be avoided in the case of the other brands which are readily soluble in water (*Jour. A. M. A.*, June 15, 1918, p. 1867).

COTARNIN HYDROCHLORID.—P. J. Hanzlik reports that while the description of the actions and uses of cotarnin hydrochlorid given in New and Nonofficial Remedies tentatively accepts certain current statements in the absence of definite published data, experiments with animals carried out by him demonstrate that the drug is devoid of hemostatic action. He holds that cotarnin hydrochlorid is entirely worthless as a local hemostatic (*Jour. A. M. A.*, June 15, 1918, p. 1883).

SEVERAL "MIXED" VACCINES NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry publishes a report announcing the rejection of a number of "mixed" vaccines. In publishing its report the Council explains its attitude toward this class of products: In view of the rapid development of bacterial therapy, the possibility for harm that attends the use of bacterial vaccines and the skepticism among experienced clinicians as to the value of vaccines representing a combination of organisms, the Council has felt that it should scrutinize the claims for such agents with exceptional care and admit to New and Nonofficial Remedies only those vaccine mixtures for which there is acceptable evidence to indicate that the particular mixture is rational. Experienced clinicians have generally come to the conclusion that mixed vaccines have no specific action and that any effect they may produce is due to a non-specific protein reaction. The preparations rejected in the accompanying reports are only a few of the many that are being sold by some biological houses. The report explains in detail the considerations which led to the rejection of the following preparations, all of which were considered because of inquiry received: 1. The Abbott Laboratories: M. Catarrhalis-Combined-Bacterin, B. Coli-Combined-Bacterin, Pertussis-Combined-Bacterin, Streptococcus-Rheumaticus-Combined-Bacterin and Streptococcus-Viridans-Combined-Bacterin. 2. Eli Lilly and Company: Catarrhal Vaccine Combined and Influenza Vaccine Combined. 3. H. K. Mulford Company: Influenza Serobacterin Mixed. 4. G. H. Sherman: Sherman's Mixed Vaccine No. 40 (*Jour. A. M. A.*, June 22, 1918, p. 1967).

MICROCOCCLUS NEOFORMANS VACCINE.—This was admitted to New and Nonofficial Remedies in 1910 since at that time it gave some promise of therapeutic value. It has now been omitted because at the present time there is no evidence that the vaccine is of the slightest value and because its lack of value is demonstrated by the fact that during these years it has not made a recognized place for itself in therapeutics. The available information indicates that the micrococcus neoformans does not differ materially from ordinary skin cocci which are described in New and Nonofficial Remedies under staphylococcus vaccine (*Reports of the Council on Pharmacy and Chemistry*, 1917, p. 152).

NU-TONE.—This "nutritive tonic" is said to have the following complex composition: Cod Liver Oil, Pure Norwegian, 25 per cent., Malt Extract, 9½ per cent., Beef Juice, Glycerine, Hypophosphite Lime, Hypo-

phosphite Soda, chemically pure, 1½ grains each to the ounce, Fluidextract Nux Vomica, ¾ of a minim in each teaspoonful. It is advertised with claims that will lead thoughtless physicians and a confiding public to depend on it in cases in which fresh air, hygienic surroundings and nutritious food are of prime importance. Adults are to take this preparation as a "nutritive" in doses which represent from 3 to 12 grains of sugar and 8 to 30 minims of cod liver oil with unstated, but probably equally small, amounts of beef juice. The Council on Pharmacy and Chemistry declared NuTone inadmissible to New and Nonofficial Remedies because it is an irrational, shotgun mixture advertised indirectly to the public with unwarranted therapeutic claims and a non-descriptive therapeutically suggestive name (*Reports of the Council on Pharmacy and Chemistry*, 1917, p. 154).

UNCTOL.—This is a paste stated by the R. R. Rogers Chemical Co., San Francisco, to contain approximately 40 per cent. metallic mercury in a soap base. It is sold as a substitute for mercurial ointment with the claim that it is more efficacious. The Council on Pharmacy and Chemistry declared Unctol inadmissible to New and Nonofficial Remedies because the claim for superiority over mercurial ointment is not substantiated and constitutes an unwarranted therapeutic claim; the name does not indicate the composition of this pharmaceutical mixture and because the circular wrapped with the trade package advertises proprietary preparations not accepted by the Council (*Reports of the Council on Pharmacy and Chemistry*, 1917, p. 162).

V-E-M PRODUCTS.—The Schoonmaker Laboratories, Inc., New York, market V-E-M Unguentum Eucalyptol Compound, V-E-M with Ichthyol, V-E-M with Stearate of Zinc, V-E-M with Camphor, V-E-M with Boric Acid. The Council on Pharmacy and Chemistry declared these preparations in conflict with its rules because unwarranted therapeutic claims were made for them; because the public was advised to depend on them in the treatment of diseases and because these combinations of ingredients in fixed proportions under proprietary names are irrational (*Reports Council on Pharmacy and Chemistry*, 1917, p. 163).

BOOK REVIEWS

RECLAIMING THE MAIMED, a Handbook of Physical Therapy. By R. Tait McKenzie, M.D., Major, R. A. M. C., Professor of Physical Therapy, University of Pennsylvania. Illustrated. Publishers, The Macmillan Company, New York, 1918. Price, \$2.00.

Reclaiming the Maimed is a very useful handbook of physical therapy. It gives an insight into some of the methods that are to be used and are being used in the great rehabilitation work of the war. It is written by a man who has been active in Army work.
T. G. O.

SCOPOLAMIN-MORPHIN, SEMI-NARCOSIS DURING LABOR. By William Osborne Greenwood, M.D. (Leeds), B.S. (Lond.), London, Henry Frowde, Oxford University Press, Hodder & Stoughton, Warwick Square, E. C. Price, \$2.00.

A small monograph of 94 pages on a timely subject. The author simply gives an account of his own experience with scopolamin-morphin. There is also a short chapter on the value of Omnopon-scopolamin. There is a good bibliography on the general subject with more particular notice given to the latest British contributions.
H. F. V.

EMERGENCIES OF A GENERAL PRACTICE. By Nathan Clark Morse, A.B., M.D., F.A.C.S., Surgeon to Emergency Hospital, Eldora, Iowa; District Surgeon Chicago Northwestern Railway, Minneapolis and St. Louis Railway; Ex-President Iowa State Association of Railway Surgeons; Ex-Vice President Pan-American Congress; Fellow American Medical Association; Member of the Society of Clinical Surgeons of North America; Author of "Post-Operative Treatment." With 251 illustrations. Publishers, C. V. Mosby Company, St. Louis, 1918. Price, \$4.50.

As the title implies, this book is intended as a work for quick reference especially for the general practitioner.

In general, it answers this purpose admirably, but at times the author is not as clear as might be desired. For instance, on page 207, a solution of 10 per cent. boric acid is advocated for ivy poisoning, whereas, if we are not mistaken, saturated solution of boric acid is a trifle under 4 per cent. The typography is good, but some of the illustrations could be improved. W. P. E.

INTERPRETATION OF DENTAL AND MAXILLARY ROENTGENOGRAMS. By Robert H. Ivy, M.D., D.D.S., Major, Medical Reserve Corps, U. S. Army; Associate Surgeon, Columbia Hospital, Milwaukee; formerly Instructor in Oral Surgery, University of Pennsylvania. With 259 illustrations. Publishers, C. V. Mosby Company, St. Louis, 1918. Price, \$2.50.

This is a volume of permanent value to the roentgenologist. The author's method of handling the subject is comprehensive and highly instructive.

The value of the book is greatly enhanced by the illustrations which cover the fields of technic and diagnosis. The roentgenograms are negative reproductions and do not tend to confuse the beginner in roentgen-ray work, as do the positive reproductions usually met with in literature.

The work covers the anatomy of the teeth and jaws, pathology, technic and interpretation. The chapters on electricity and construction of roentgen machines consisting principally of a compilation of manufacturers' catalogs, which have marred most of the recent texts on dental roentgenology, have been omitted by Dr. Ivy in his new book. G. C. B.

DIFFERENTIAL DIAGNOSIS. Presented Through an Analysis of 317 Cases. By Richard C. Cabot, M.D., Assistant Professor of Clinical Medicine, Harvard University Medical School. Volume 2, Second Edition. Octavo of 709 pages, 254 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$6.00 net.

Teaching medicine by means of case histories has grown to be a popular method. In the second edition of Cabot's *Differential Diagnosis* a few new points on shell shock, gallbladder and appendix disease have been added, but in a general way the additions have been very few. Probably no medical author has a larger personal following than R. C. Cabot—his point of view is usually unique and he accepts no doctrine without critical analysis. The general consideration of certain symptoms which precedes each chapter is especially valuable as is also the relative frequency of the causes of these symptoms as shown by the analysis of a large number of case histories. His discussion of the cases is very instructive and he records his mistakes as faithfully as he does his correct diagnoses. The value of the book might be still further enhanced if the ultimate outcome of more of the cases was cited. It is rather disappointing to follow the critical analysis of a case only to be told that the "patient left the hospital unimproved after three weeks." Cabot's *Diagnosis*, however, may be recommended as the best work of its kind and could be read with profit by anyone interested in the accurate diagnosis of internal medical conditions.

L. H. H.

DIABETIC MANUAL FOR THE MUTUAL USE OF DOCTOR AND PATIENT. By Elliott P. Joslin, M.D., Assistant Professor of Medicine, Harvard Medical School; Consulting Physician, Boston City Hospital; Collaborator to the Nutrition Laboratory of the Carnegie Institution of Washington, in Boston; Major, M. R. C. Illustrated. Publishers, Lea & Febiger, Philadelphia and New York, 1918. Price, \$1.75.

Dr. Joslin has given in brief, untechnical language, an outline of the physiology and treatment of diabetes which is simple, to be used as a guide by diabetic patients. The recently developed methods of treatment, the modified fasting method (Allen), and their application are well described. The fundamental dietetic and physiological facts are carefully stated. Very reliable dietetic recipes are given at length, as well as dietetic tables. A final chapter in the estimation of sugar in the urine and blood, and the determination of the degree of acidosis complete the book.

The volume constitutes a most valuable brief résumé of the modern treatment of diabetes, the reading of which lies easily within the leisure time of the busiest. W. B.

ORAL SEPSIS IN ITS RELATIONSHIP TO SYSTEMIC DISEASE. By William W. Duke, M.D., Ph.B., Kansas City, Mo., Professor of Experimental Medicine in the Department of Medicine in Western Dental College; Visiting Physician to Christian Church Hospital; Consulting Physician to Kansas City General Hospital, Kansas City, Mo., and to St. Margaret's Hospital, Kansas City, Kan. With 170 illustrations. Publishers, C. V. Mosby Company, St. Louis, 1918. Price, \$2.50.

In this attractive little volume of 124 pages the author has succeeded admirably in presenting the subject of oral sepsis in its relationship to systemic disease.

He displays an intimate knowledge of the literature of the subject. At the same time he presents many original observations based on a large clinical experience.

Dr. Duke's close association with members of the dental profession is evident and this work should do much toward bringing about a better understanding between the professions of medicine and dentistry in the solution of the problems of oral sepsis. He directs particular attention to the change in the point of view that roentgenology of the teeth has effected in the practice of dentistry. Instead of being directed solely toward the preservation of the teeth for mechanical and cosmetic purposes, it must include as its chief end the cure and prevention of systemic disease.

The book should be read by every dentist and every physician. It is to be commended for its clarity and conciseness. H. W. S.

THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES IN GENERAL PRACTICE. By L. W. Harrison, D.S.O., Lieut.-Colonel, R. A. M. C.; Lecturer on Venereal Diseases and Officer in Charge, Military Hospital, Rochester Row. Publishers, Henry Frowde, Hodder & Stoughton; Oxford University Press, Warwick Square, E. C., London, 1918. Price, \$7.50.

A treatise on venereal diseases by so eminent an authority as Colonel Harrison is assured of a cordial reception by the English speaking medical world.

This sturdy little volume, attractively bound in dark red cloth, contains much that is of interest and value to the specialist, as well as to the general practitioner for whom it was written.

After a brief chapter on equipment for diagnostic work and for treatment, forms for case records and directions for the general examination of patients are given.

The differential diagnosis of the various diseases which might give rise to cutaneous lesions resembling those of syphilis is then taken up in detail, and the various manifestations of lues described. Forty or more pages are devoted to syphilis of the cerebrospinal system, and one entire chapter to gonorrhoeal and syphilitic affections of infancy and childhood.

Detailed instructions are given for the routine examination of laboratory material, and the very great value of the dark field illuminator as a diagnostic aid is properly emphasized. As might be expected in a book written by so practical a medical man, the chapters on treatment are especially comprehensive and valuable. The little hand syringe in the treatment of gonorrhoea is condemned by the author who says "it would be better to trust to the effects of urination for the washing of the urethra, since a syringe in the hands of the average patient cannot fail to introduce septic matter into the urethra and easily provoke complications." The irrigation method is the one of choice, and a number of formulas for irrigation solutions are given. The author's favorite is potassium permanganate, in strengths of 1:8,000 or 1:6,000 during the first week. Proflavine (1:2,000) has been tried, and with promising results.

The treatment of syphilis is discussed in a thorough and exhaustive manner. It is a pleasure to note that the value of intramuscular injections of the various arsenical preparations is at last being recognized. The reviewer believes that it is only a question of time until the rage for intravenous medication, with its great dangers and its comparatively fleeting therapeutic effects, will subside, and more rational and effective methods be adopted.

The appendix contains valuable lists of instruments and appliances commonly used in the diagnosis and treatment of venereal affections, together with stains and staining methods for diagnostic work.

A few minor criticisms may be justified. The "third venereal disease," balanitis gangrenosa, which is sometimes a very serious disorder when its nature is unrecognized, is entirely ignored.

In describing the various arsenical preparations which we in America include in the arsphenamin and neo-arsphenamin groups, the author, in his struggle to escape Teutonic contamination, recklessly adopts a general designation of "606"—and thus, inadvertently, out-Hinders old von Hindenburg himself!

These trivial omissions are readily excusable, however, and detract but little if at all from the value of a very practical, sensible, and well balanced piece of work.

R. L. S.

THE SPLEEN AND ANEMIA; EXPERIMENTAL AND CLINICAL STUDIES. By Richard Mills Pearce, M.D., Sc.D., Professor of Research Medicine, with the assistance of Edward Bell Krumbhaar, M.D., Ph.D., and Charles Harrison Frazier, M.D., Sc.D. 16 illustrations, color and black and white. Philadelphia and London. J. B. Lippincott Co. Price, \$5.00.

In the light of the acknowledged importance of the spleen in the human economy our ignorance as to its function has often been a matter of comment. This ignorance may perhaps be accounted for by the fact that it is not a "vital" organ—that its presence is not necessary to the maintenance of life or even of health. Indeed, our awakened interest in the organ rests on the discovery that under certain circumstances its continued presence may be distinctly injurious. During the past few years the operation of splenectomy has been performed with increasing frequency on patients with various forms of anemia accompanied by more or less splenic enlargement, and the marked benefit following the operation in certain varieties of these anemias has greatly stimulated our inquisitiveness as to the rôle which the spleen plays both in health and disease. Unfortunately, much of this inquiring spirit has found satisfaction in the pro-

mulgation of this or that theory based on more or less incomplete clinical studies before and after splenectomy. Little has been done toward an orderly solution of the many basic questions of spleen function by the methods of experimental physiology. The various sporadic investigations which have been undertaken have left so many questions unanswered that we have in our honest zeal supplied theories where facts were wanting, and since all the investigators have not had recourse to the same theories we have, as a result, that not unfamiliar phenomenon of the same facts being used to support quite opposite conclusions. A distinct service has therefore been rendered by the authors in undertaking a series of fundamental studies in spleen physiology, particularly in regard to the relation of the spleen to the red cells, and in gathering into one volume a summary of the important data on the subject from the work of other observers, as well as a summary of our present knowledge of splenic disease from the clinical standpoint.

In reviewing the authors' experimental studies one cannot avoid the conclusion that real progress must be sought through this and similar methods. This is demonstrated with particular force in the observations dealing with the rôle of the spleen in the causation of hemolytic icterus. One has but to recall in this connection the several theories as to the effect of the spleen on the chemistry of the red blood cell and to compare these with our authors' observations as to the factors actually concerned, to realize how far astray we may be led. In a series of experiments on dogs it was determined that when hemoglobin is set free in the portal circulation a larger amount is held by the liver and converted rapidly into bile pigment than is the case when the same amount of hemoglobin is set free in the general circulation, and that under the former condition an overloading of the liver with bile pigment more readily occurs and jaundice is more apt to develop. It would appear, then, that the lessened tendency to hemolytic jaundice after splenectomy must not be attributed to an increased resistance of the red blood cells, although such increased resistance does exist. It must be accounted for in part at least by the lack of direct flow of blood from the spleen to the liver so that the free hemoglobin reaches the liver in less concentration than it would through the splenic vein. For in dogs in which the spleen has not been removed but in which the splenic vein has been ligated or transplanted into the inferior vena cava so as to prevent the direct flow of blood from spleen to liver, the same result was noted, i. e., there was a lessened tendency to jaundice just as in the splenectomized animals. The authors are, therefore, unable to adopt Banti's views as to the rôle of the spleen in hemolysis. They were unable to detect any difference in the blood of the splenic vein, as far as free hemoglobin and resistance of the red blood cells to hemolysis is concerned, from that of venous blood from any part of the body; and while they admit that the red cells of the splenectomized animals are more resistant than the normal they are inclined to attribute this to an indirect rather than to a direct effect of the splenectomy.

The conclusions as to the value of splenectomy in pernicious anemia are interesting. The postoperative mortality was 20 per cent. This they believe may be improved by a more careful selection of cases and by preceding the operation by one or several blood transfusions. Patients with large spleens and those with an anemia characterized by excessive hemolysis have received most benefit; only 15 per cent. failed to show improvement, but in none of the 153 patients observed can it be said that a cure has been effected.

The last pages of the book are devoted to a consideration of the surgery of the spleen, and an extended bibliography of some 500 references is appended to this most useful and timely work.

J. E. C.

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ORIGINAL ARTICLES

CAN WE DISREGARD THE CALENDAR IN SETTING THE DATE FOR LABOR?*

F. T. VAN EMAN, M.D., CAPT., M. R. C.
KANSAS CITY, MO.

To one who has given obstetrics any marked degree of thought and study it cannot be otherwise than apparent that there is something wrong somewhere when we take the statistics and find that such a large number of women lose their lives annually either directly or indirectly as a result of childbirth, and what to some must be almost worse than death, chronic invalidism for the balance of their lives; when we look over our hospital records and see that such a very large percentage of the operative cases are due to causes resulting from injuries and infections occurring in parturition; when we estimate the loss in dollars and cents which so many of our childbearing women can ill afford; when we know that men are attending maternity cases who have practically no conception of the real conditions prevailing in a given case and who use obstetric forceps very much as they would a crow-bar; when we take into consideration all these things and many others we cannot but realize that we are confronted with a complex problem which certainly deserves more attention than it has received in the past.

Continuing along this line of thought I wish to quote from an article published in the *American Journal of Obstetrics*, September, 1917, by Dr. Ralph W. Lobenstine, N. Y., on "The Development of Prenatal Care in the Borough of Manhattan, New York City." "Comparing the death rate due to childbirth in the United States with foreign countries, it has been shown that out of sixteen leading countries the United States stands fourteenth, our death rate in this field being surpassed only by Switzerland

and Spain, while Sweden with a total death rate of 6 per 100,000 stands at the top."

To illustrate further the sad results from lack of prenatal and natal care he quotes from G. L. Meigs, of the Division of Hygiene, Children's Bureau, U. S. Department of Labor, as follows: "More women between the ages of 15 and 45 die in the United States from conditions incident to maternity than from any other cause except tuberculosis, and since 1900 when the death rate from tuberculosis, typhoid fever, diphtheria, croup and from certain other preventable diseases has been greatly reduced, the available figures from the death registration area, show NO decrease in the proportion of mothers whose lives are yearly sacrificed as a result of ignorance and neglect."

Again it must be apparent that there is something wrong somewhere. We can not say that there has been no advance in the science of obstetrics, for we know there has been. In Kansas City we have five hospitals, including our General Hospital, which have well-equipped and organized maternity departments. Five years ago we had none. Ten years ago it would have been commercial suicide for any man to limit his work to obstetrics. At the present time there are ten or twelve active members in the obstetric section of the county society, eight of whom are practically and several of whom are limiting their work entirely to obstetrics. These few men are, however, only doing a minor portion of the maternity work in Kansas City, the bulk of the work being, as it always will be, in the hands of the general practitioner and the midwife. These same conditions no doubt exist in all cities large enough to support hospitals and obstetricians; and in those which are not so, and in the country, the general practitioner and midwife do it all.

Does this explain the state of affairs, obstetric, as quoted above?

Far be it from me to claim that the obstetrician has no trouble of his own, that no mistakes are his and no errors of judgment, but my observation has been that while the great majority

* Read at the Sixty-First Annual Meeting, Missouri State Medical Association, Jefferson City, May 7, 1918.

of the general practitioners are keen, wide-awake and thoroughly alive to the medical issues of the day, yet many of them are practicing obstetrics according to methods in vogue twenty-five or more years ago. Many are doing obstetrics, not because they like it and wish to do it, but because they feel compelled to do so, and this, coupled with the fact that the fees for this work are shamefully inadequate as compared with those in other lines, makes a combination which is anything but conducive to real obstetric practice.

The foregoing applies largely to the question of maternal mortality, and while there is nothing quite so tragic as the death of a mother in childbirth, yet I cannot help but feel that a mother left an invalid as a result of her pregnancy and confinement is almost as much of a tragedy, and that the question of maternal morbidity from physical, mental, social and economic standpoints, must sooner or later become a matter of great moment to those concerned.

Taking up the other side of the question and referring again to Lobenstine's article we find that in New York in 1916 nearly 13,000 babies died under one year of age, and nearly 50 per cent. of these under two months, largely from prenatal causes including injuries at birth, nearly 5 per cent. being still-born.

Similar conditions no doubt prevail elsewhere, and with the frightful wastage of men in the great world war, it certainly is a most opportune time for the medical profession to take up seriously all matters pertaining to the conservation of the future human race.

For many years I have not been entirely satisfied with some of my work in obstetrics, or rather some of the results of my work, and it has seemed to me that one great cause of our trouble was the constant recurrence of cases in which there was a lack of proper proportions between mother and baby. When we know that boy babies average 7 to 7½ pounds, and girls 6½ to 7 pounds, and that 105 boys are born to 100 girls; also when we know that owing to the greater weight of boys and the larger size of their heads, so many boys are lost in delivery as compared to girls, that the balance is restored and even more than restored in favor of girls, it is apparent that my conclusions were correct to a certain extent.

It however was not until the McDonald and Ahlfeld's methods of determining the size and maturity of the fetus with such a wonderful degree of accuracy had been placed in my hands that I felt justified in disregarding the calendar and inducing labor in certain cases where I was satisfied that the time of fetal maturity had been reached and that the unborn child's rights could be conserved as well as the mother's.

I have always been and am still unalterably opposed to big babies, I mean 9 pounds or

more, and especially first babies. Five and one-half to seven pounds in weight and 47 to 50 cm. in length is enough for any baby with which to start a vigorous extra-uterine existence, and a whole lot easier for the mother; most often causing no injury whatever or very slight if at all.

We not infrequently meet with patients who once, twice and some, even many times, have gone into labor when at term or past term and who have been each time delivered of 10 pound, 12 pound, or even larger dead babies. Babies killed in delivery that possibly or even probably would have been saved by the methods which I shall describe, but for which I claim no priority.

I shall cite three cases only in order to illustrate my point, the first two belonging to what one might say, the positive phase, the other, the negative.

CASE 1.—Mrs. X., aged 27, primipara; passed through her gestation in a perfectly normal manner. Pelvic measurements—I. S. 26.2 cm., I. C. 29.2 cm., I. T. 34, Bandalocque 20 cm., pelvic circumference 100 cm. A short, chunky little woman with a birth canal well padded with fat and rather close. According to menstrual date her gestation was completed on December 29. Following lightening the fundus dropped from 37 cm. to 29 cm. above pubes and while the child was apparently small I felt that it was best for the mother and child as well to bring her into labor at term. She therefore entered Wesley Hospital on December 30, at which time she was prepared for labor and given 1 ounce castor oil, which frequently is all that is necessary. In this case, however, this failed so on the following day under general ether anesthesia a No. 4 (large size) Voorhees bag was inserted. Labor supervened in six hours and progressed nicely for fifteen hours. She was delivered spontaneously of a living child 46 cm. long, weighing 5 pounds, 2½ ounces, with absolutely no injury to either child or mother. Fetal presentation vertex and position left occipito-anterior. Puerperium perfectly normal in every respect. Mother now in fine condition and baby, though only three months old, has more than doubled its original weight.

CASE 2.—Mrs. Y., aged 38, Para No. 2, Grava No. 2. This patient consulted me on November 7, which was at the end of the thirty-sixth week of this pregnancy. Her first pregnancy, two years previous, had gone to term and after a long, tedious and difficult labor she was delivered with forceps of a still-born baby weighing somewhere between 10 and 12 pounds. Two hours were required to deliver the head and shoulders so it is quite evident that the baby was killed in delivery.

Her husband being a very large man, weighing close to 300 pounds, and as she was again becoming very large herself, she had become very apprehensive of the life of this child.

Her pelvic measurements were I. S. 27, I. C. 30.2 cm., I. T. 35 cm., Bandalocque 20 cm., and P. C. 96.2, all normal or above. McDonald measurements showed fundus 33 cm. above pubis and Ahlfeld's measurement showed fetus to be 44 cm. long. She was instructed to return in one week and at this time McDonald's measurement was 37 cm and Ahlfeld's 52 cm., a very rapid increase in seven days' time, which if continued up to the normal time, December 7 or longer, as it might easily have, gave us a fairly good chance for a repetition of her first disaster. I therefore sent her into Wesley Hospital at this time and three weeks before term a No. 4 Voorhees

bag was inserted under general anesthesia. Labor supervened in one hour and thirty minutes, and seven hours later she was delivered spontaneously and easily of a 7-pound baby, without injury to either mother or baby. The Ahlfeld measurement was not so accurate in this case, the baby being only 49 cm. in length instead of 52 cm. and while we sometimes miss, yet it is surprising how closely the results will check up to measurements made post-partum.

The puerperium in this case was absolutely normal and this baby now about 5 months old has more than doubled its original weight.

To say positively that this result could not have been obtained by allowing nature to take its usual course would be making a statement which could scarcely be substantiated. However, all the signs point in that direction and we certainly had a pretty labor with a living, lusty and uninjured baby and an uninjured mother, and we certainly have made a happy little family. This woman was 38 years old and the chances for other pregnancies were not the best.

CASE 3.—This case was brought into Wesley Hospital, Dec. 26, 1917, but did not come under my observation until December 30. This was one of those cases in which nature was allowed to take its course and made a poor job of it. The last menstrual date was March 1, 1917, therefore she was due to fall in labor December 6. She was a small woman and in spite of the fact that she was becoming enormous in size and going over her time, yet nothing seemed necessary other than to wait. December 26 there occurred a little blood-tinged vaginal discharge and she was brought into the hospital on that date, though no other signs of active labor were present. The pains began December 28 and continued up to December 30, at which time I saw her. She had been examined repeatedly during this time and had developed a temperature and a pulse of 110 plus. Her abdomen was enormously distended and seemed completely filled with baby. Ahlfeld's measurement was 62 cm. The fetus lay left occipito-anterior, vertex presenting, and a rough guess placed the weight at 13 or 14 pounds. The mother's heartbeat was transmitted throughout the entire fetal body but no fetal heart could be heard. No fetal movement had been noticed for about one week, therefore it was apparent that we had a dead baby, dead from pressure. A macerated baby delivered later proved this to be correct.

An already infected woman, with baby almost surely dead, did not offer much for a cesarean section, therefore the delivery was made by the natural channel with a great deal of injury to the mother. The baby weighed 13.2 pounds and was 62 cm. long.

The mother's convalescence was stormy but eventually she left the hospital and as soon as she can have all the secondary repair work done that she needs she may be restored to a fairly decent condition.

Here we had a woman 30 years old, married ten years, first pregnancy, intensely longing for a child, a dead baby—sacrificed on Nature's altar—a mother injured almost beyond hope of first-class repair, and an expense which they could little afford.

And all could have been prevented by one thing—prenatal care.

Again I say that I am unalterably opposed to big babies.

Summing up, I believe that in certain selected cases we can disregard the calendar in setting the date for labor and the more we study our cases the greater number will we find which are selected cases. And for the future welfare of our mothers and babies and the personal satisfaction of our work, I also believe that a careful prenatal study of our cases of pregnancy

and the judicious use of the bag or some other equally satisfactory method of inducing labor marks one of the greatest advances obstetrics has ever known.

DISCUSSION

DR. E. D. TWYMAN, Independence: The doctor's paper seems to me very important because it answers the question which always has been uppermost in the minds of those who do confinements. They have always needed some method that would indicate—first the maturity of the child, and second the size of the child. They have needed to know that the child was mature because some condition might arise which would make further continuance of the pregnancy dangerous, such as a toxemia, perhaps not having gone so far as to produce eclamptic convulsions, still it would seem better to produce labor. Or if it might seem well to do a cesarean section, the question of viability would have to be considered.

Now DeLee in his latest textbook on obstetrics mentions the McDonald and Ahlfeld measurements but without commending them especially. Probably he has not gone to the trouble of checking them up to see if they are effective or if he has done so he has found they are not satisfactory. Which is the case I am not able to say. It would be a wonderful thing if Dr. Van Eman is correct and if these methods are effective in determining size and viability, because then we would know that a given child could live even if labor were induced.

The size of the child is also important. We have always been able to measure the pelvis and to know that a given pelvis is narrower than it should be; and to know that that pelvis would give trouble with a child of normal size to say nothing of a child of abnormal size. But we have not been able to know whether a given child would fit a given pelvis. I think the particular series of observations the doctor has embarked on will begin to answer that question for us.

801 Rialto Building.

PREVENTION OF DEFORMITIES IN TIME OF PEACE AND WAR*

B. BELOVE, M.D.

KANSAS CITY, MO.

Prevention of deformities should begin with the newly born baby. All infants should be examined as early as possible for possible deformities or conditions that may develop into deformities later and the proper measures taken at once. For example, if a slight deviation of spine or foot abnormality is noticed, the attending physician should figure out the proper position for the child to lie in, to overcome the abnormality; sometimes it may be accomplished by instructing the mother how to hold the baby, or to construct a cast-bed in which the baby may comfortably lie, in an overcorrected position. There should be no hesitation on the part of the physician to call in an expert if need be, for even the slightest deformity may develop into an incurable disability.

When the child reaches school age society

* Read by title at the Sixty-First Annual Meeting, Missouri State Medical Association, Jefferson City, May 7, 1918.

must provide for it a desk and chair orthopedically correct, that would not tend to develop the slight deformity into an actual deformed condition. All schools in the land should have the modern, scientifically correct furniture for all children; for even normal children have been known, on entering school, to acquire deformities due to antiquated desk and chair, not conforming with the size of the child.

When we consider what a great percentage of our young manhood is not able to perform the highest duty to the state—military service—on account of disabilities, a great many of which could have been prevented in early childhood and school life, the subject of prevention of disabilities is worth considering more earnestly than before. There has never been in the history of medicine such an interest aroused in orthopedics as at the present time. All bellig-

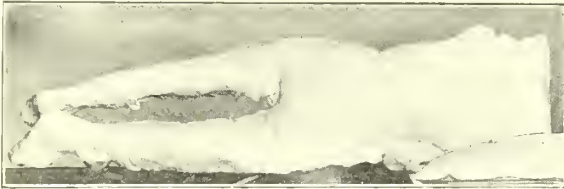


Fig. 1.—Cast-bed for baby to lie in in any position desired to prevent malposition or deformity.

erents have orthopedic commissions, whose function is to rehabilitate the wounded soldier, which consists in the following:

1. Active medical and surgical treatment.
2. Functional re-education.
3. The provision of artificial appliances.
4. Professional re-education (or vocational training).
5. Establishment in civilian life.

Functional re-education comprises mechanotherapy; gymnastics, graduated exercises, massage, treatment by galvanic, static, foradic and high frequency currents; hot baking, vibration and colored light.

The value of active movement is being emphasized. The exercises at first are simple. It is not passive mechanotherapy, but active, initiated by the patient himself, are to be insisted upon. To those who lost poise and habit of movement, through long confinement, these exercises are indispensable.

Leg exercises comprise walking along lines, straight and irregular, stepping over obstacles of varying height and shape, ascending and descending steps with irregular treads. Arm exercises comprise the handling of objects of various sizes and forms, also devices which require the head to be put in different positions. The use of passive massage and heat is given a great deal of consideration in the French hospitals, and nurses and male attendants are being efficiently instructed. Work, apart from its

psychic effect, constitutes the best means of re-acustoming muscles to action. In many French hospitals workshops have been equipped by private societies. These provide for the distribution and marketing of the salable articles at a fair price. The creating of taste for work and maintaining the patients in a good frame of mind is the chief purpose of these organizations. It is estimated that about 0.4 per cent. of the wounded will require vocational training. In about 90 per cent. of these cases the vocational training will be determined by the knowledge and dexterity in a trade or a profession, already acquired. In other cases, personal knowledge of the patient's inclinations and skill will have to be studied.

All workshops keep themselves informed as to the requirements of labor in the various industries. The aim of instruction is to train inclinations, as that is the temperamental complement of skill. Unless a disabled man has chosen his occupation wisely and has become master of it, with gradual return of economic struggle—there will be little chance for his success.

About 1 per cent. of the wounded will require artificial appliances. About $2\frac{1}{2}$ to 3 per cent. of Belgian wounded were amputated.

Amputation stump is put first in the proper extension and when functional re-education is completed, then follows the fitting of the indicated appliance. Plaster model of the stump is essential. The fitting and construction of the artificial limb is undertaken from three to five months after the operation. The appliance should tend to remedy the *anatomical* as well as the *physiological* loss. Professor Amar's steel forearm and claw gives useful service and many an armless man in earning good wages.

The Commission d'Orthopedie in France has full charge of the work, and all appliances are of these patterns, to be revised yearly. These comprise artificial limbs, skull caps and plates after craniotomy, and springs to replace muscles of those amputated in France— $\frac{3}{5}$ legs and $\frac{2}{5}$ arms (French estimate).

The classes of military cases calling for orthopedic treatment are numerous, for example, lesions of nerves requiring a long course of treatment by splinting, massage, electricity, as well as nerve suture or tendon transplantation, etc. The orthopedic center contains workshops where appliances can be fitted and learned for the correction of feet deformities and painful conditions.

Of fractures—compound fractures generally are the most serious of injuries, not only from the standpoint of infection, but also deformity, which may persist after complete healing.

Restoration of function is one of the main purposes of orthopedics.

In order not to have the self respect and social standing of the disabled lost, early and organ-

ized effort is being made to convince the disabled that they can and must again become self sustaining, and that the duty of the state is not to support them, but rather equip them with the means of earning a living wage.

In the war hospitals all attendants are instructed to be cheerful to the patients, to impart hope, and to encourage their self respect and self support.

Chambers Building.

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 Em. Von Eberts, Surgeon to Montreal General Hospital.

THE TREATMENT OF VULVOVAGINITIS IN CHILDREN*

E. C. SAGE, M.D., LIEUT., M. R. C.
ST. LOUIS

In January, 1917, I took up the treatment of gonococcus vulvovaginitis in children at the Out-Patient Department of the Washington University Medical School, as Dr. C. C. Allen, who had started the work, left for the European war zone. It had been his idea to test out the efficacy of the various therapeutic measures advocated for the cure or alleviation of this seemingly intractable disease. I have included in my report those cases previously treated by Dr. O. Schwarz, who systematized the work.

Dr. Fred Taussig¹ reported a series of cases treated in this clinic in 1914. I present this paper to show you the inadequate methods that necessarily have to be employed at this time to cope with this problem, in the hope that your interests may be sufficiently aroused so that some radical changes may be instituted to prevent the spread of the disease by getting the patients back to the dispensary for observation and treatment until they are pronounced cured; so that hospital attention may be provided for the deserving cases, and so that we may obtain the proper co-operation with the Social Service by paying a worker to see that the patients carry out at their homes the instructions that they receive from the doctor.

My report is incomplete, as many of the cases are being treated every week and will have to be until their vaginal smears remain negative

on successive visits. We do not consider a case cured until the smears, taken from the cervix by means of a probe directed through a female electric-lighted urethroscope are negative for three successive weeks. We can report a series of twenty-two cases treated by local measures that we have pronounced cured, the case reports of which I have abstracted in a separate table. Some of the cases we have followed from two to three years with the average length of *cure thirteen months*; some of the cases clearing up in four to eight months.

Butler and Long,² Cook County Hospital, reported twelve cases of children treated by KMnO_4 douches at four hour intervals, followed by 20 per cent. argyrol instillations, most of which after a month or more of such treatment had the profuse vaginal discharge. We find it very hard to have the patient return to the clinic after the discharge has ceased, as they think they are cured. When they are of school age the supervisor of hygiene requires them to report until their smears are negative, but we have twenty-three patients under 5 years of age, and unless we have a social worker we soon lose them.

The local measures used here have been instillations of 1 to 5 per cent. silver nitrate, after thorough cleansing of the external genitals and vagina with water; 5 per cent. protargol, potassium permanganate douches and hot sitz baths at home, and zinc oxid ointment to the irritated vulva.

It was hoped to run a similar series of cases by the instillation of Bulgaria bacilli, samples of which were kindly supplied by Fairchild and Foster. As it has been shown³ that smears from the vagina where the Bulgaria bacilli have been implanted twelve hours before do not show any bacilli, it was folly for us to expect results when our patients could only be seen three times a week at best. Having no hospital beds at our disposal where we could keep the cases under constant observation, we tried to have seven cases return to the clinic as often as possible and treated them by this method and thought that the discharge lessened but results are too inconclusive for any opinions to be given.

The most rational and efficient treatment seems to be the vaccines. A most convenient way of administering these was to have the patient buy a box of Mulford's mixed Neisserian bacterin which contains four tubules of graduated doses of 50, 100, 200, 400 million gonococci; staphylococcus aureus, albus, strepto-

* From the Out-Patient Department of the Washington University.

1. Taussig: American Journal of Medical Sciences, October, 1914.

2. Butler and Long: Journal American Medical Association, April 9-Oct. 17, 1908.

3. Rosenthal: Journal of Laboratory and Clinical Medicine, St. Louis, 1916, i, 757-59.

coccus, bacillus coli and diphtheroid bacillus. These injections were given at ten-day intervals. Many of the patients could not afford to buy the vaccine, so at present the department is buying Parke-Davis gonococci vaccine so that it can be tried out on a series of cases. One 2-year-old child received the four graduated injections over a period of two months, but still had the discharge with intracellular diplococci when she moved out of town; another 3-year-old child, raped by an 18-year-old boy, has received five injections, the discharge is markedly less and the diplococci only extracellular. I have seven other cases under similar treatment, the report of which with others can only be made at a later date.

It is because of some thirty other cases with positive smears of which I can give you no definite results that I bring this matter to your consideration. They are a source of infection in their immediate sphere as I have no place to isolate them, cannot get them to the clinic to be treated and have no one to follow them up and see that they carry out their instructions at home.

Richard M. Smith⁴ of Boston believed that the medical treatment should be carried on hand in hand with the social service work, as the disease is purely a social evil, showing in his series of thirty cases that 70 per cent. of the cases were from preventable sources; 3.3 per cent. hospital infections; 13.3 per cent. from playmates; 13.3 per cent. assault; 53.3 per cent. other members of family infected; undetermined causes 16.6 per cent. It is after his extensive plan of cooperation that our social service notes are fashioned.

Dr. Smith believes that the outlook for cure is good if treatment is rigidly enforced, but that the doctor must make the parents realize the danger and cooperate. We have had a list of instructions printed to help the parents carry out certain routine at home, this being on the order of instructions used at the Polyclinic at New York. They are as follows:

WASHINGTON UNIVERSITY DISPENSARY
 OUT-PATIENT DEPARTMENT
 of
 BARNES HOSPITAL AND ST. LOUIS
 CHILDREN'S HOSPITAL
 No. 28

For..... Date.....

INSTRUCTIONS TO PARENTS

1. This is a contagious disease which requires treatment until the physician pronounces the child cured. It sometimes persists for many months.
2. Always wash the hands thoroughly, both before and after bathing parts, to avoid infecting other members of the family. The discharge, if carried to the eyes, may cause blindness.

3. The child should sleep alone. Be sure that no one uses any toilet article, towels, napkins or wash cloths used by the patient. All napkins, sheets, underclothing, towels and wash cloths should be boiled. Bath tubs, basins, and everything else coming in contact with the patient, should also be washed thoroughly.
4. All children with this disease should wear a napkin or pad, which should be changed daily.
5. The child should be instructed not to touch the affected parts. The child should not attend school or day nursery lest other children become infected.
6. Cleanse the parts externally at least four times daily with water.
7. Report to the clinic every.....

We did not take the opsonic index of our patients treated with vaccine, and no attempt was made to use the complement fixation tests for the diagnosis or the proof of the presence or absence of cure by such treatment, as Dr. Earnest E. Irons⁵ has quite conclusively proven in his work at the Memorial Institute of Infectious Diseases, Presbyterian Hospital, Chicago, that such tests are not of much value. He concluded from his investigation (1) a strong or moderately positive action indicates the presence or recent existence of a gonococcus infection; (2) a weakly positive action has only a limited confirmative value, and if the test is to be used for diagnostic purposes it should be repeated; (3) the reaction may change from positive to negative and from negative to positive during the course of the infection. Such tests should be considered negative in suspected cases; (4) the reaction may become negative while gonococcus are still present in the body, therefore a single negative reaction must be interpreted with great care either in the determination of cure or for diagnostic purposes.

He also cited twelve cases from which the gonococcus had been isolated, where the complement fixation was positive in seven of the cases and negative in five. In another series of five cases where the gonococcus was isolated the complement fixation test was positive in four. This illustrated quite positively the great variation in the degree of the complement fixation test in known cases where cultures were taken every few days, in some cases daily for fifteen days.

Dr. G. G. Smith,⁶ Boston (Mass.) General Hospital, gave some results of the complement fixation test as regarded cure. Of the ten cases which had negative blood reactions and apparent cures one year previous nine returned the following year for examination. Of these, three had negative blood tests, six were weakly positive or suspicious, five of which gave every sign of cure from the clinical standpoint, none having had any discharge, yet

4. Smith, R. M.: American Journal of Diseases of Children, 1913.

5. Irons: Journal of Infantile Diseases, 1915, xvi, 303-310.
 6. Smith, G. G.: American Journal of Diseases of Children, March, 1914.

bearing weakly positive blood tests. Dr. Wright, who did these tests, believed that a slight inhibition of hemolysis (as seen in weakly positive tests) might be due to a so-called "group reaction," that is, the gonococcus antigen would combine to a slight degree with the antibodies due to allied micrococci. Dr. Irons stated that occasionally in adults and more frequently in children a fairly (+) reaction occurred in persons who had never had gonococcus. In the face of such results I did not deem it feasible nor profitable to control our cases with the complement fixation test.

Vaccine treatment has been carried out under the guidance of the opsonic index by Butler and Long,² who claimed a cure in 75 per cent. of the acute cases treated, with an improvement in the remainder; and 85 per cent. of the chronic cases cured. They began with a small dose of vaccine, and as the index suggested proceeded to larger doses, noting at the same time the clinical effects. They claimed that the action on the local infection was usually prompt; during the first twenty-four hours there was often observed an increase in the discharge, but usually there followed a decided abatement coincident with the rise in the opsonic index. They found that not infrequently after two or three injections the discharge disappeared with an absence of gonococcus in the smears. As an average dose they started with from 10 to 25 million increasing with 5 million at a time, to 50 million per dose. They found the initial opsonic index of no prognostic value.

B. Wallace Hamilton⁷ pointed out very clearly the absence of any constitutional symptoms from the injection of gonococcus vaccine. He gave one child, 8 years old, one thousand million killed bacteria into the buttocks at one dose and repeated it for three days. The temperature, pulse and respiration was taken after two hours, there being no rise in temperature nor subjective symptoms. In the majority of cases he started the treatment with fifty million bacteria, after five days increasing the dose to ten million until five injections were given and worked up the dose to two hundred million. Six injections were generally sufficient for complete cure, meaning no discharge and a negative Gram stain once a week for four weeks and two subsequent examinations at intervals of two weeks. Nineteen of his eighty-four cases treated returned after six months from time of last injection, showing no evidence of the infection. To show the intractability of the disease when only local treatments were used, the following table was compiled from cases of three years' standing:

Treatment	Total Number of Cases	Cured	Uncured	Lost	Per Cent.
Irrigations	260	158	53	49	60
Vaccine	84	76	5	3	90

The average length of time under treatment by irrigation 10.1 months. The average length of time under treatment by vaccines 1.7 months.

In conclusion, he pointed out (1) the absence of reaction after inoculation or the very slight reaction which always subsided within twenty-four hours after injection; (2) the absence of constitutional disturbances; (3) the short time for 85 per cent. cure; (4) the ease of the administration; (5) the harmlessness of the inoculation method when used under aseptic conditions; (6) the uselessness of taking the opsonic index and (7) the inadvisability of the irrigation treatment, thus taking the child's attention from her genitalia, which at times, as previously mentioned, encourage precocious masturbation.

The 260 cases mentioned in chart as being treated only locally included the following methods: viz., $\frac{1}{5}$ per cent. AgNO₃, $\frac{1}{10}$ per cent. protargol, $\frac{20}{50}$ per cent. argyrol, $\frac{1}{2}$ -5 per cent. ichthargan, $\frac{1}{2}$ per cent. collargol, $\frac{1}{10}$ per cent. ichthyol, and $\frac{10}{50}$ per cent. emulsion Bulgaria bacilli; five irrigations, viz., $\frac{1}{4000}$ KMnO₄; Condys fluid 1 dram to a pint (consists of solution of KMnO₄ and aluminum sulphate providing a larger amount of available oxygen); 0.9 per cent. NaCl; 3 per cent. boric acid, and $\frac{1}{1000}$ per cent. formalin.

Results of other investigators with the vaccines.—Nathaniel Barnett,⁸ Mount Sinai Hospital, New York, fourteen cases, no cases improved. Cited one case of complete cure in an arthritis complicating vaginitis.

Kerley,⁹ thirty-six cases treated, average cure eleven months (7.050,000,000 bacteria). One case treated two years, smears still positive. One case treated four years, no result. He concluded that gonococcus vulvovaginitis is a self-limited disease and that something takes place during the child's life that makes the vagina less hospitable for the gonococcus. In children from six weeks to one year the infection is most virulent. After this age the infection becomes less and less frequent.

Alice Hamilton,¹⁰ at Cook County Hospital, reports: Injected children, discharge lasted twenty days. Non-injected children, discharge lasted twenty-one days. With chronic cases the average duration of discharge prior to inoculation treatment was a little less than four months, and duration after treatment not quite three weeks.

Butler and Long,² Cook County Hospital, report: In four cases clinical symptoms disappeared in from twelve to twenty-one days. Stubborn cases sometimes cleared up when polyvalent vaccine was used. Monovalent vac-

7. Hamilton, B. Wallace: American Journal of Obstetrics, 1910, 837.

8. Barnett: Archives of Pediatrics, 1913, 650-702.

9. Kerley: Archives of Pediatrics, 1914, 702.

10. Hamilton, Alice: Journal of Infantile Diseases, 1908.

cines gave such good results that the autogenous vaccine was not thought necessary. Average cured cases forty-three days. Young cultures of gonococci.

Churchill and Soper,¹¹ at Rush Hospital, report: Treated, forty-one patients. Cured cases, duration of treatment two to seventy-seven. Average, twenty-three days. Old cultures of gonococci.

Edith R. Spaulding,¹² Children's Hospital, Boston, reports: Used both local treatment and vaccines and had many recurrences four, six, eight and twelve months after she thought the case was cured with the average duration of time for cure one year and eight months. She found that these patients were liable to any complications seen in adults and cited six cases of proctitis; five of cystitis; four arthritis; one pelvic peritonitis; one vaginal adenitis and supuration; one vulvovaginal abscess; one ischio-rectal abscess; 4.7 per cent. purulent ophthalmia of 148 cases.

Butler and Long² had no favorable results with the serum treatment. One case they treated seventy-two days. Discharge persisted. Three other cases they treated eighty days with no perceptible change. Rubin and Leopold¹³ used a specific serum applied locally by vaginal tampon left in place twenty-four hours, finding that the serum proved an excellent media for the growth of bacteria with no antibactericidal effect on the gonococci.

BULGARIA BACILLI

I have already mentioned a different method of treatment of these cases, namely, the instillation of Bulgaria bacilli, the attempt being made to implant Bulgaria bacilli in the vagina, which by their growth and the product of metabolism thus formed, would produce an acid condition hindering the growth of gonococci; and in this way foci of infection would be reached that the ordinary methods of irrigation, instillation and vaccine had no effect on. I will give an extract from M. B. Cohen's³ article as to what the experimenter Rosenthal found working in Hayem's laboratory. He performed symbiotic culture experiments with this organism and numerous others, among them the meningococcus group, to which the gonococci belongs. He considered it necessary to determine if the Bulgaria bacilli would grow in the vagina, and whether, when grown there, it would cause death to the gonococci or inhibit its growth. He used (1) Parke-Davis' organisms, (2) stomach contents of gastric carcinoma, (3) from normal human saliva and (4) the Bulgaria Bacilli Products Co.; centrifugalizing the mixed culture of these four strains

which he grew for forty-eight hours at 37.50 C. and mixed this with a 5 per cent. lactose solution. His mixture was injected twice a day with a luer syringe and all other treatment stopped. In three cases with profuse discharge containing gonococci smears were taken twice a week for Bulgaria bacilli and gonococci; and not once were Bulgaria bacilli demonstrated even when taken twelve hours after injection. In two cases, after ten days, no gonococci were found and discharge had practically ceased. Then treatment was discontinued for two days. On the third day discharge was present again with gonococci in smears. Then treatment was resumed for three weeks with very few gonococci in smears. His third case developed measles. He concluded that Bulgaria Bacilli did not thrive in the human vagina, and therefore was of little use in the treatment of gonococci vulvovaginitis.

We recognize on how small a scale we have carried out our work in comparison to the elaborate care and treatment such patients can get in a hospital like the Philadelphia General, where there has been maintained since 1903 special beds for these patients suffering from vaginitis, so that now they have a whole floor turned over to this disease with some fifty beds at their disposal.

The St. Louis Children's Hospital will not accept these cases for treatment. It may be interesting to know that there are only six hospitals in the country which at all times maintain a special ward for these patients suffering from vaginitis. So with what means we have had at hand we have treated some fifty cases with local treatment and vaccines, the reports of which have been tabulated. We have had the hearty support of Dr. James Stewart, supervisor of hygiene, who with the aid of the school nurses, has been largely responsible for the return of the patients who are very prone to discontinue treatment as soon as the external discharge ceases. The Social Service Department has given what aid they could, but having no special person they could assign to the work, no efficient home supervision of treatment could be had. As it was shown in the final report of the committee on vaginitis in children read at the American Pediatric Society, May 8-10, 1916, the problem presented by vaginitis is slowly but surely increasing, and it seems to me that no more valuable work could be done by our department of Social Service than efforts expended along this line, especially when one realizes that during 1914 there were sixty-four deaths of children reported under 10 years of age due to gonococci infection. Since vaginitis and ophthalmia neonatorum are the chief types of gonococci infection, the latter rarely fatal, most of the sixty-four fatalities probably followed infection through the vaginal route.

11. Churchill and Soper: *Journal of American Medical Association*, Oct. 17, 1908.

12. Spaulding: *American Journal Diseases of Children*, 1913.

13. Rubin and Leopold: *American Journal of Diseases of Children*, 1913.

To close I would call attention to the report of this condition by the committee on vulvovaginitis of children of the American Pediatric Society.¹⁴

To the chief health officer of forty-eight states and one hundred cities of 50,000 population a system of questions were sent. Eighty six replies were returned from the 157 places, showing that only nine communities had investigated the prevalence of the disease, and the twenty-six had made some effort to control the spread of the disease. In six cities gonococcus vulvovaginitis is a reportable disease, an effort being made to exclude those infected from the public schools.

The salient points in the suggestions offered by the public health officials for the control of the diseases were: (1) Examination of all patients of school age, making gonococcus vulvovaginitis a reportable disease, the affected person quarantined and systematically treated; (2) Passage of local and state laws controlling admission to schools and public institutions.

Approximately half of the physicians thought that 90 per cent. of the vaginitis cases were due to the gonococcus. However, the percentage of positive results in the differentiation between simple and gonococcus vulvovaginitis might be even larger were greater care taken in making the smears, as fifteen out of ninety-six physicians contented themselves with securing material from only the external genitalia. Eleven of the doctors had adult patients whom they had treated during childhood. Five of the eleven patients had no complaints. Six of the patients had sequelæ, such as pelvic peritonitis, sterility, tendency to abort, etc., of the infection they had acquired before puberty.

As to the source of the infection, there were eleven instances of indirect contact with adult members of the family, chiefly in bed and in some cases, immoral. Sixty-nine cases of toilet or toilet articles, of which, in twelve instances, the school was specified. Fifty-three cases from nurse or attendant. Twenty-eight cases from direct transmission, probably immoral. Eight other cases of direct or indirect from playmates, probably immoral. Five cases from clothing. Five cases from diapers or dressing.

As to treatment employed, the local measures most generally used were $KMnO_4$ and $AgNO_3$. There were twenty-nine doctors favoring vaccine; eleven who did not. Time of cure from six days to six years. Fifty-three of the seventy-one doctors gave average six weeks to six months. Test of cure, reported failure to find gonococcus, in smears or vaginal secretion for at least two months after all treatment has been stopped.

Possibility of cure.—Twenty-three per cent. of the doctors believed cure possible in all cases; 11.4 per cent believed cure impossible or

doubtful; 81 per cent. enumerated subsequent attacks in supposedly cured cases, while only 5 per cent. believed in reinfection. One doctor who studied systematically the cases in a clinic devoted exclusively to gonococcus vulvovaginitis believed that 80 per cent. of the second attacks were true recurrences.

A majority of the doctors believed that the control of the spread of the disease in childhood depended chiefly on the adequate isolation of the patient and thorough treatment in hospitals, together with proper instructions to the laity.

In May, 1917, there appeared in the American Journal of Diseases of Children¹⁵ a review of the literature of the past five years on gonococcus vulvovaginitis in childhood by J. Claxton Gittings and A. Graeme Mitchell of Philadelphia, with forty-seven references, which is the best source I could find for getting the proper conception of the contagiousness, frequency and increase, bacteriology, complement fixation tests, pathology, complications, sequelæ, treatment, opsonic index, duration and latency, cure and prophylactic measures used.

To institute stricter preventive measures, various questions arise. That the parents may be made to recognize the contagiousness of the disease: (1) Should educational literature be prepared and distributed through the medium of physicians, hospital dispensaries, health centers and municipal visiting nurses? (2) Should gonococcus infection be made a reportable disease? (3) Should asylums for children and day nurseries be licensed, and that the license be not granted unless, first, the institution has adequate facilities for the recognition of gonococcus vaginitis, and second, that the institution exclude children having the disease if they can not be properly isolated. (4) Should children known to have gonococcus vaginitis be excluded from school and not readmitted until the receipt of a physician's certificate that he has examined the child once a week for the period of three weeks and that there has been no discharge during this time? (5) Should cities be required to provide adequate hospital and dispensary facilities for the care and treatment of children having vaginitis? And see that its schools have toilet seats embodying the U-shape and that toilets be the proper height for the different ages. (6) Should nursing care and supervision be given in the home? (7) Should all cases of vaginitis under observation be voluntarily reported to the local health officer in states and cities in which no legal requirements are in force?

According to the United States Public Health Service, gonococcus infection of the genital tract is a reportable disease in ten states.

Barnes Hospital.

14. Transactions of the American Pediatric Society, Vol. 28, 1916.

15. Gittings and Mitchell: American Journal of Diseases of Children, May, 1917, 438-456.

CHRONIC PROGRESSIVE CHOREA IN THE
NEGRO—CASE REPORT

FRANCIS M. BARNES, JR., M.D.

AND

EMIL HEIN, M.D.

ST. LOUIS

Chronic progressive chorea, known sometimes after the name of the physician whose description first attracted widespread attention to it as Huntington's chorea, or from one of its prominent symptoms as hereditary chorea, may be described briefly as a chronic, hereditary disease usually beginning in adult life, affecting the sexes equally, having a gradual onset beginning with twitching in the face and difficulty in articulation, spreading next to the arms and legs, or may be general in its distribution from the onset. The choreic movements are never localized after the disease has progressed for any length of time. The movements are extreme, coarse and non-rhythmical, thus differing from those in Sydenham's chorea or in athetosis. The movements in chronic progressive chorea are not under voluntary control, become worse while under observation or while the patient is talking about them, cease during sleep and never give rise to complaints of fatigue. There occur no muscular wasting, no sensory disturbances, and no pathological reflexes, although the deep tendon reflexes are usually found increased. Mental impairment in the nature of a dementia sooner or later appears and gradually progresses with the disease. Incident to the fundamental dementia, emotional instability is notable. Delusions of persecution are not uncommon and suicidal trends are varyingly prominent, especially in the depressed cases. A definite characteristic pathology is not as yet known, although many evidences tending to show that we have to deal with a neurodegenerative process have been described. A cure has yet to be reported.

Although not a common disease, Huntington's chorea is sufficiently well recognized to require no elaborate clinical description at this time. The literature has been gone over quite thoroughly by others and for the historical bibliography one may refer to Boyd's paper (Hereditary Chorea with Report of a Case, W. A. Boyd, *Boston Med. and Surg. Jour.*, 1913, clxix, 680-684). There is a unanimity of opinion, however, that chorea of any type is rare in the negro race, and so far as Huntington's chorea is concerned a review of the literature discovers but occasional reference to

its occurrence in this race. A case is reported by Drewry (W. F. Drewry, *Charlotte Med. Jour.*, 1895, vii, 318-323), and another by Bower (Chronic Progressive Chorea with Report of an Interesting Case in a Negro, J. L. Bower, *Jour. of Ment. and Nerv. Dis.*, 1890, xv, 131). Aside from these two we have found no definite reports, though an exhaustive bibliography research has not been attempted. The disease is sufficiently uncommon, at all events, to make the following case report worth while. So far as the writer (Barnes) can recall this is the first case of Huntington's chorea in the negro coming to his attention, although a large number of this race were seen during some ten years' experience in Baltimore and Washington. The abstract of the history and clinical record which follow were prepared by Dr. Hein.

N. J., male, negro, laborer, aged 37. Mother died apparently of Huntington's chorea between 40 and 45 years of age. Otherwise nothing is known of the family. Patient was born in Hinton West Virginia. Nothing especial in the early life. Gives a history of syphilitic infection three years ago. The date of onset of the present illness cannot be accurately stated because of the patient's variations. So near as can be learned he probably first showed some motor disturbances some fifteen years ago. No accurate data as to the site of origin is obtainable. He states that this trouble became worse two years ago following an injury. Upon arrival in St. Louis he was arrested for peculiar conduct presumably his motor disturbances and brought to the City Hospital.

Examination shows an average sized, well developed negro, weighing 150 pounds. Left pupil is larger than the right, both slightly irregular in outline and show a delayed light reaction. Tendon reflexes are active. No pathological reflexes. Patient walks without difficulty but there is noticed an irregular, swaying, jerking movement of the body and extremities. The muscles of the hands, arms and face are likewise involved in these choreic movements. There are no sensory disturbances. Wassermann with the blood and spinal fluid is positive. There is a very obvious disturbance of memory both for recent and remote events. Orientation is good, no delusions or hallucinations present, no evident emotional disturbance and especially no depression. Is always amiable, good natured. His intellectual level is certainly lower than is to be expected even in one of his race and opportunities, and an evident degree of dementia is present.

The diagnosis in this case is so apparently one of Huntington's chorea that a full report is not considered necessary and therefore only an abstract of the record is given. The positive Wassermann in the blood and spinal fluid is not taken to be of greater importance than indicating a coincidental syphilis of the nervous system which had its beginning only three years ago, and many years after the chorea started.

University Club Building.

Constitution and By-Laws
of the
Missouri State Medical Association

CONSTITUTION

ARTICLE I.—NAME OF THE ASSOCIATION

The name and title of this organization shall be the Missouri State Medical Association.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Missouri, and to unite with similar Associations in other States to form the American Medical Association, with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of State medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

SECTION 1. This Association shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The Members of this Association shall be such of the members of the component county medical societies as shall be approved by this Association.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.

SEC. 4. GUESTS. Any distinguished physician not a resident of this State may become a guest during any Annual Session, upon invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, and (2), *ex-officio*, the officers of the Association as defined in this Constitution.

ARTICLE VI.—SECTIONS AND DISTRICT SOCIETIES

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VII.—SESSIONS AND MEETINGS

SECTION 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, delegates and guests.

SEC. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE VIII.—OFFICERS

SECTION 1. The officers of this Association shall be a President, five Vice Presidents, a Secretary, a Treasurer, and twenty-nine Councilors more or less, as shall be determined by the House of Delegates from time to time.

SEC. 2. The President and Vice Presidents shall be elected for a term of one year. The Secretary and the Treasurer shall be elected by the Council at its annual meeting and each shall hold his office for one year. The Councilors shall be elected for terms of five years each, being so divided that one fourth of the number shall be elected each year. All these officers shall serve until their successors are elected and installed.

SEC. 3. The President, Vice Presidents and Councilors shall be elected by the House of Delegates; but no delegate shall be eligible to any office named in the preceding section except that of Councilor, and no person shall be elected to any office who is not in attendance at that Annual Session and who has not been a member of the Association for the previous two years.

ARTICLE IX.—FUNDS AND EXPENSES

Funds for meeting the expenses of the Association shall be arranged for by the House of Delegates by an equal per capita assessment upon each county society to be fixed by the House of Delegates, by voluntary contribution, and from the profits of its publications. Funds may be appropriated by the House of Delegates to defray the expenses of the Annual Sessions, for publications, and for such other purposes as will promote the welfare of the Association and profession.

ARTICLE X.—REFERENDUM

The General Meeting of the Association may, by a two-thirds vote, order a general referendum upon any question pending before the House of Delegates, and the House of Delegates may, by a similar vote of its own members, or after a like vote of the General Meeting, submit any such question to the membership of the Association for a final vote; and if the persons voting shall comprise a majority of all the members present, a majority of such vote shall determine the question, and be binding upon the House of Delegates.

ARTICLE XI.—THE SEAL

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

ARTICLE XII.—AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates registered at that Annual Session, provided that such amendment shall have been presented in open meeting at the previous Annual Session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

BY-LAWS

CHAPTER I.—MEMBERSHIP

SECTION 1. All members of component societies shall be privileged to attend all meetings and take part in all of the proceedings of the Annual Sessions, and shall be eligible to any office within the gift of the Association.

SEC. 2. The name of a physician upon the properly certified roster of members, or list of delegates, of a component society which has paid its annual assessment, shall be *prima facie* evidence of his right to register at the annual session in the respective bodies of this Association.

SEC. 3. No person who is under sentence of suspension or expulsion from any component society of this Association, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member or delegate shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION

SECTION 1. The Association shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session or as fixed by this Constitution and By-Laws.

SEC. 2. Special sessions of either the Association or of the House of Delegates shall be called by the President at his discretion or upon petition of twenty delegates.

CHAPTER III.—GENERAL MEETINGS

SECTION 1. The General Meetings shall include all registered members, delegates and guests, who shall have equal rights to participate in the proceedings and discussions and, except guests, to vote on pending questions. Each General Meeting shall be presided over by the President, or in his absence or disability, or by his request, by one of the Vice Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President, and the entire time of the session so far as may be shall be devoted to papers and discussions relating to scientific medicine.

SEC. 2. The General Meeting shall have authority to create committees or commissions for scientific investigations of special interest and importance to the profession and public, and to receive and dispose of reports of the same; but any expense in connection therewith must first be approved by the House of Delegates.

SEC. 3. Except by special vote, the order of exercises, papers and discussions as set forth in the official program shall be followed from day to day until it has been completed.

SEC. 4. No address or paper read before the Association, except that of the President, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5. All papers read before the Association shall be its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

CHAPTER IV.—HOUSE OF DELEGATES

SECTION 1. The House of Delegates shall meet annually at the time and place of the Annual Session of the Association, and shall so fix its hours of meeting as not to conflict with the first General Meeting of the Association, or with the meeting held for the address of the President and so as to give delegates an opportunity to attend the other scientific proceedings and discussions so far as is consistent with their duties. But, if the business interests of the Association and profession require, it may meet in advance or remain in session after the final adjournment of the General Meeting.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each major fraction thereof, but each county society holding a charter from this Association, which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 3. A majority of the registered delegates present shall constitute a quorum, and all of the meetings of the House of Delegates shall be open to members of the Association.

SEC. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping-stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 7. It shall encourage postgraduate and research work, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the American Medical Association, in accordance with the Constitution and By-Laws of that body.

SEC. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

SEC. 11. It may divide the counties of the State into Councilor Districts.

SEC. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates; and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

SEC. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

SEC. 14. It shall present a summary of its proceedings to the last general meeting of each Annual Session, and shall publish the same in the transactions.

CHAPTER V.—ELECTION OF OFFICERS

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The President, on the first day of the Annual Session, shall select a Committee on Nominations consisting of ten delegates, no two of whom shall be from the same councilor district. It shall be the duty of this committee to consult with the members of the Association and to hold one or more meetings at which the best interests of the Association and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the name of one member for each of the offices to be filled by the House of Delegates at that annual session except that of President, who shall be nominated from the floor of the House of Delegates.

SEC. 3. The House of Delegates shall remain in continuous session on the first day of the Annual Session and complete the work coming before it at that session. The report of the nominating committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes at the evening meeting of the House of Delegates.

SEC. 4. Nothing in this chapter shall be construed to prevent additional nominations being made by members of the House of Delegates.

CHAPTER VI.—DUTIES OF OFFICERS

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; shall deliver an annual address at such time as may be arranged; shall give a deciding vote in case of a tie, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State

during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work practical and useful.

SEC. 2. The Vice Presidents shall assist the President in the discharge of his duties. In the event of his death, resignation or removal, the Council shall select one of the Vice Presidents to succeed him.

SEC. 3. The Treasurer shall give bond for the trust reposed in him whenever the House of Delegates shall deem it requisite. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall, under the direction of the House of Delegates, sell or lease any estate belonging to the Association, and execute the necessary papers; and shall, in general, subject to such direction, have the care and management of the fiscal affairs of the Association. He shall pay money out of the treasury only on a written order of the Chairman of the Judicial Council countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands. He shall charge upon his book the assessments against each component county society at the end of the fiscal year, which shall be December 31st; he shall collect and make proper credits for the same, and perform such other duties as may be assigned to him.

SEC. 4. The Secretary shall attend all meetings of the Association and of the House of Delegates, and he shall keep minutes of their respective proceedings in separate record books. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall keep a card index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association for publication. In so far as it is in his power he shall use the printed matter, correspondence and influence of his office to aid the Councilors in the organization and improvement of the county societies, and in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

In order that the Secretary may be enabled to give that amount of time to his duties which will permit of his becoming proficient, it is desirable that he should receive some compensation. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL

SECTION 1. The Council shall hold meetings during the Annual Session of the Association, and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Councilors. It shall hold at least one meeting during the Annual Session of the Association, after the newly

elected Councilors have been announced by the House of Delegates, for reorganization and for outlining the work for the ensuing year. At this meeting it shall elect a Chairman and a Secretary and the latter shall keep a record of its proceedings. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided. It shall be the Executive Committee of the Association during the interval between meetings. Three members of the Council, elected by the Council, shall be the Executive Committee of the Council and shall constitute a quorum for the transaction of business excepting that concerning the conduct of a member, when a majority of the membership of the Council shall be necessary to act; provided, the action of the Executive Committee of the Council shall be subject to the approval of the Council.

SEC. 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exists, for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his doings, and of the condition of the profession of each county in his district to each annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates upon a proper itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

SEC. 3. Collectively the Council shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members or of a county society, upon which an appeal is taken from the decision of an individual Councilor or component society. Its decision in all such cases shall be final.

SEC. 4. The Council shall provide and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint an editor and such assistants as it deems necessary. All money received by the Council, or its agents, resulting from the discharge of the duties assigned to them, must be paid to the Treasurer of the Association, and all orders on the Treasurer for disbursements of money in any way connected with the work of publication must be endorsed by the Chairman of the Council and countersigned by the Secretary of the Association. All matters of the Association pertaining to the expenditure of money for other purposes shall be referred, during the Annual Session, to the Council, who shall report upon the same within twelve hours, and if the House of Delegates orders the expenditure of money in connection with said report, the payment shall be made by the Treasurer as provided above. It shall be the further duty of the Council to hold the official bond of the Treasurer for the faithful execution of his office, annually to audit and to authenticate his accounts, and to present a statement of the same in its annual report to the House of Delegates, which

report shall also specify the character and cost of all the publications of the Society during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary.

In the event of a vacancy in the office of the Secretary of the Association, or the Treasurer, the Chairman of the Council shall fill the vacancy *ad interim* until the next meeting of the Council.

SEC. 5. The Council shall have the right to communicate the views of the profession and of the Association in regard to health, sanitation and other important matters to the public and the lay press. Such communication shall be officially signed by the Chairman and Secretary of the Council, as such.

CHAPTER VIII.—COMMITTEES

SECTION 1. The standing committees shall be as follows:

- A Committee on Scientific Work.
- A Council on Health and Public Instruction.
- A Council on Medical Education.
- A Committee on Defense.
- A Committee on Cancer.
- A Committee on Vaccination.
- A Committee on Nominations.
- A Committee on Arrangement.

And such other committees as may be necessary. Such committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members appointed by the President. One of these shall be the Secretary of the Association, and he shall act as the chairman of the committee. It shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates, or of the Association, or to the provisions of this Constitution and By-Laws. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented, which order shall be adhered to by the Association as nearly as practicable.

SEC. 3. The Council on Health and Public Instruction shall consist of three members and the President and Secretary. The members of this committee shall serve for a period of three years; except that upon the adoption of this amendment one member shall be elected to serve for one year, one for two years and one for three years, and thereafter one member shall be elected each year. Under the direction of the House of Delegates, it shall represent the Association in securing and enforcing legislation in the interest of the public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall utilize every organized influence of the profession to promote the general influence in local, State and National affairs and elections. Its work shall be done with the dignity becoming a great profession, and with that wisdom which will make effective its power and influence. It shall have authority to be heard before the entire Association upon questions of great concern, at such time as may be arranged during the Annual Session.

SEC. 4. The Council on Medical Education shall consist of three members, appointed by the President. One member shall be appointed to serve for three years, one for two years and one for one year; thereafter each year one member shall be appointed to serve for three years. The Council on Medical Education shall make (1) an annual report to the House of Delegates on the existing conditions of medical education in the state and in the United States; (2) make suggestions as to the means and methods by which the State Medical Association may best influence favorably medical education; and (3) act as the agent of the Missouri State Medical Association, under the instructions of the House of Delegates, in its efforts to elevate the standard of medical education.

SEC. 5. The Defense Committee shall consist of three members who shall, upon request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against any member of the Association.

CONDITIONS

(a) Any member whose annual dues have been received by the Secretary of the County Society on or before April 1 shall have the continuous protection provided for in this section. New members have a right to defense on receipt of their dues by the Secretary of the County Society.

(b) Any member whose annual dues have not been received on or before April 1 shall be delinquent from the first day of January of that year and shall remain so until his dues are paid. No member shall receive legal defense for any malpractice suit filed before the date of his enrolment as a member or during his delinquency; nor if the services for which malpractice is alleged were rendered wholly or in part before the date of his enrollment as a member or during his delinquency.

(c) Any member desiring to avail himself of the provisions of this section shall, within three days after any demand has been made upon him, present his request to the Secretary of this Association, together with a complete history of the case and the services therein rendered. The committee shall then, with the aid of its counsel, advise said member up to the time of the institution of suit. Should suit be filed, a copy of the plaintiff's petition must be immediately forwarded to the Secretary of this Association. The committee shall thereupon provide such medical expert and legal services of counsel as may be necessary, but in no case shall the cost to this Association be in excess of \$100 for all such services. The Association does not obligate itself to pay, nor shall it pay in whole or in part, any damages agreed upon in compromise, or awarded after trial, nor shall it pay any of the expenses incident to the taking of depositions nor any of the costs of court.

(d) No member shall be entitled to the above described defense should the charge of malpractice be brought jointly against him and a hospital or sanatorium in which he is, or at the time of the alleged malpractice was, financially interested.

(e) Such aid as is specified in this section refers to civil malpractice only and is not to be construed to apply to criminal prosecutions.

SEC. 6. The Committee on Cancer shall consist of three members who shall make an annual report of the prevalence of cancer in this state, its nature and the progress in its treatment.

SEC. 7. The Committee on Vaccination shall consist of three members to serve for three years, except that on adoption of this amendment one member shall be elected to serve three years, one to serve for two years, and one to serve for one year; thereafter each year one member shall be elected to serve for three years. It shall be the duty of this committee to make a report on vaccination in Missouri and to investigate the entire subject of vaccination and its relation to smallpox and other diseases and conditions; the first committee appointed under this provision to make a report of vaccination in Missouri in the last decade.

SEC. 8. The Committee on Nominations shall be appointed and perform its duties in accordance with the provisions of Chapter V, Sections 2 and 3 of these By-Laws.

SEC. 9. The Committee of Arrangements shall consist of the component society in the territory in which the Annual Session is to be held. It shall, by committees of its own selection, provide suitable accommodations for the meeting places of the Association and of the House of Delegates and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—ASSESSMENTS AND EXPENDITURES

SECTION 1. An assessment of three dollars (\$3.00) per capita on the membership of the component societies is hereby made the annual dues of this Association, of which one dollar (\$1.00) shall be credited to subscription of the *THE JOURNAL* for one year. The Secretary of each county society shall forward its assessment together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Association on or before December 31st in advance of each Annual Session.

SEC. 2. Any county society which fails to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or the House of Delegates until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

CHAPTER X.—RULES OF CONDUCT

SECTION 1. The Association recognizes and reiterates the principles laid down in the Principles of Medical Ethics of the American Medical Association.

SEC. 2. It is unprofessional for a physician to recognize or support in any manner any school of medicine, or any alleged method of treating disease or injury, based on exclusive dogma or sectarian system or professedly limited to the use of certain methods or designated by special titles or otherwise reputed in the profession as irregular. For a physician to consult with, exchange material benefits with, or to recommend or support a practitioner of any such system is unprofessional and constitutes gross misconduct.

CHAPTER XI.—RULES OF ORDER

The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII.—COUNTY SOCIETIES

SECTION 1. All county societies now in affiliation with this Association or those that may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, upon application to the Council, receive a charter from and become a component part of this Association.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council or House of Delegates, and shall be signed by the President and Secretary of this Association. The Council or House of Delegates shall have authority to revoke the charter of any component county society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who does not support or practice or claim to practice sectarian medicine who shall apply on the prescribed form and subscribe for THE JOURNAL, paying the dues for the current year, shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right of appeal to the Council and to the House of Delegates.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, upon request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each county society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county. No one shall become a member of any component county society, nor continue as such, who engages in contract practice with any lodge, society or individual, unless he shall receive for services rendered the regular fee, as per fee bill established by said society; provided that this shall not prohibit an agreement for a particular case nor apply to examinations for an adequate fee. No one shall become a member of any component county society, nor continue as such, who is guilty of soliciting patronage or obtaining patients by a division of fees, or by other means of inducing physicians or other persons to bring patients to him for a consideration, for treatment or operation.

SEC. 11. Frequent meetings shall be encouraged, and the most attractive programs arranged that are possible. The younger members shall be especially encouraged to do postgraduate and original research work, and to give the society the first benefit of such labors. Official position and other preferments shall be unstintingly given to such members.

SEC. 12. At some meeting in advance of the Annual Session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty (50) members, or major fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association, at least ten days before the Annual Session.

SEC. 13. The Secretary of each county society shall keep a roster of its members, and a list of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information, upon blanks supplied him for the purpose, to the Secretary of this Association, on or before December 31st in advance of each Annual Session, and at the same time that the dues accruing from the annual assessment are sent in. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

CHAPTER XIII.—ENTERTAINMENTS

No official entertainment shall be accepted by this Association during its Annual Session.

CHAPTER XIV.—AMENDMENTS

These By-Laws may be amended at any Annual Session by a majority vote of all the delegates present at that Session, after the amendment has laid upon the table for one day.

Emergency clause provides for immediately going into effect after adoption.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

SEPTEMBER, 1918

EDITORIALS

MAKING OUR ASSOCIATION 100 PER CENT. AMERICAN

When in May, 1917, one month after the declaration of war with Germany, our Association at its annual session adopted a resolution declaring that any member who should give aid or assistance to an enemy of the United States would *ipso facto* forfeit his membership in our Association, the first step was taken in making the organized medical profession of Missouri 100 per cent. American.

That every member who has a true concept of loyalty to this country has approved the letter and spirit of the resolution is amply verified by the large number of voluntary enlistments in the medical departments of the military forces of the country and the great variety of services for the government performed by the physicians who remain at home, many of the latter, it may be said in passing, having been held to home work much against their ardent desire to "go across." It is a matter of considerable satisfaction from the standpoint of the loyalty of our Association as a body that the provisions of the resolution have not been enforced against any member. It must not be forgotten, however, that the silence and inactivity of a member concerning his readiness to serve the United States in the present conflict as a loyal American should serve, would justify the assumption that he is violating the spirit if not the letter of the resolution. We hope it will not be necessary to apply this corrective measure to any of our members, but it should be thoroughly understood that our Association will sternly frown upon any member who fails to render the full measure of service of which he is capable in this fight for freedom, and that we will, if the occasion should justify such action, follow the example set by the bar association in one of the states recently when it expelled two lawyers for disloyal utterances.

The time has arrived when loyalty to America must be an outstanding quality of every member of our Association, and means have been provided for all of us to manifest our willingness to serve, irrespective of age or of physical condition. These means are, service in the Medical Reserve Corps of the Army and the Naval Reserve Force by physicians who

are under 55 years of age, physically and professionally fit for active service; and the recently reorganized Volunteer Medical Service Corps. All our members are familiar with the requirements for enlistment in the Medical Reserve Corps and the Naval Reserve Force, but the purposes of the Volunteer Medical Service Corps are not quite so well known. On another page in this issue we publish full information concerning this corps.

The Volunteer Medical Service Corps will enroll every reputable physician who is not eligible for service in the Army or Navy or the United States Public Health Service, and thus present an opportunity for the mobilization of the entire medical profession during the period of the war. President Wilson, when approving the reorganized Volunteer Medical Service Corps, paid a high tribute to the medical profession for its service to the government and expressed his deep appreciation of the service which the profession has rendered to the nation. "The health of the Army and the Navy," he said, "the health of the country at large, is due to the cooperation which the public authorities have had from the medical profession; the spirit of sacrifice and service has been everywhere present and the record of the mobilization of the many forces of this great Republic will contain no case of readier response or better service than that which the physicians have rendered." The *St. Louis Republic*, in commenting on this nationwide mobilization of the medical profession, says: "Physicians and surgeons are as necessary as guns and ammunition in war, and because of the unusual demands upon a limited number of men, the medical profession has been harder hit than any other civilian class."

As an association we have no control over the actions of physicians who are not members of our organization, but we can require every member of our Association to exhibit that spirit of loyalty to America and to medical organization which will make the Missouri State Medical Association 100 per cent. American.

COUNTY MEDICAL SOCIETIES AND THE WAR

Ever since the reorganization of our Association in 1903, we have emphasized the importance of membership in the county, state and national organizations, and it has become generally acknowledged both within the profession and among the laity that affiliation with the organized profession is an honor and a distinction that few reputable physicians did not seek to attain. The qualifications for membership have been liberal and until now free from any reference to racial characteristics or predilections. The violence and confusion of

war, however, have brought us sharply up against a condition affecting membership in our Association that cannot be winked at nor lightly thrust aside. That condition is the loyalty to America of every member and every candidate for membership.

The country will undoubtedly need the service in one form or another of every physician of good moral and professional standing, for in the past twenty-five years medicine has made itself indispensable in such a great variety of ways that the avenues of its usefulness are almost numberless. There is, therefore, something for every reputable member of the profession to do in the service of his country at this time. A knowledge of the kind of service that each member is able to give his country will be of the greatest value to the government, and therefore it is proposed by the Medical Section of the Council of National Defense that the qualifications for membership in our organization be so modified during the period of the war that the loyalty and patriotism of each member shall be above suspicion. The modifications proposed are:

(a) After November 1, 1918, applicants for membership in any county medical society and the State Medical Association of Missouri shall be rejected unless they are members of the Medical Reserve Corps of the Army or Navy, or of the Volunteer Medical Service Corps.

(b) The membership of any physician in these societies who is not a member of the M. R. C. of the Army or Navy, or of the V. M. S. C. shall terminate as soon after Nov. 1, 1918, as his membership for the current year expires.

(c) Alien physicians or naturalized aliens not eligible for the M. R. C. or the V. M. S. C. may be retained as members, if they can prove their loyalty to the United States beyond question in a manner satisfactory to the Auxiliary Medical Defense Committee of their respective county societies, provided that no physician born in an alien enemy country or a country allied thereto who has failed to take advantage of ample opportunity for his naturalization which may have been open to him, shall be retained on the membership list at the expiration of the year 1918.

In order to make these changes operative it will be necessary for the county societies to amend their by-laws by including this provision in the section defining the qualifications for membership, or by adopting a resolution incorporating these changes. The latter method might be preferable because a resolution has the force of a by-law until it is rescinded, and when the war is over the need of this provision will cease to exist. Whether the by-laws are to be amended or a resolution introduced, it is necessary that notice be sent to all members of the society in accordance with the method laid down in the by-laws.

The suggestion has the approval of the president of our Association and of the executive committee. It is another step toward making our Association 100 per cent. American.

GUARDING THE PORTALS

Some communities in the state have lost quite a large proportion of their medical population through enlistment in the active service and by removal to other localities that seem to promise more inviting prospects. It is the duty of county societies to invite every worthy physician locating in their county to become a member of the society and in ordinary times the usual qualifications for membership as laid down in the by-laws suffice; but we are now living under very extraordinary and unusual conditions, both as members of the medical profession and as citizens. It is therefore incumbent upon the county societies to guard the portals of entry to the medical organization with jealous vigilance, to prevent the admission of undeserving persons into our ranks.

It is not difficult to deceive physicians as a rule because most of them are honest, upright, conscientious, God-fearing men and women, and for that very reason they hesitate to impute to another motives that conflict with the honorable practice of medicine and the rules and regulations of our Association. But instances are not lacking where men who have destroyed their usefulness in one community by actions unworthy of a member of our guild have moved into territory where they are unknown and clothed in the habiliments of respectability, they have succeeded for a time in disguising their real nature.

We would not have any society unjustly discriminate against a new arrival in the community, but it must not be forgotten that the society suffers loss of esteem by the people whenever a physician, lacking the qualities of character and repute that form the basis of our organization, is admitted to membership. Hence we urge that all who apply for membership, especially when their antecedents are unknown to the members of the county society, should be required to present credentials of an acceptable nature before they are elected. The worthy physician who seeks membership will be not only willing to meet this requirement, but he will voluntarily offer such testimony. The other kind we do not want.

Let us revert once more in this connection to the necessity of ascertaining why those applicants for membership who are within the age limit for active governmental service are not so employed. Every such candidate should present satisfactory evidence that he is a loyal American, that he is a member of the Medical Reserve Corps, or has been honorably discharged or rejected for honorable reasons. If he is beyond the age limit for active service then he should be a member of the Volunteer Medical Service Corps or show evidence that he will apply for such membership.

SENATOR TAYLOR DEFEATED

The Sixth Senatorial District of the Missouri Legislature is a district where nomination is equivalent to election. This district includes the counties of Chariton, Linn and Sullivan, and was represented by Dr. John S. Wallace of Brunswick, one of our honored members, in the 48th General Assembly, but who died before his term in the senate had expired. In the primary elections Dr. Wallace was opposed by Mr. John D. Taylor, a lawyer of Keytesville. The contest was an exceedingly lively one, as Taylor is a young man with considerable experience in political campaigns, having served as a member of the lower house of the General Assembly for one or two terms, representing Chariton County, and was extremely anxious to don the senatorial toga. When he found this ambition opposed by a candidate drawn from the ranks of the medical profession, a physician whose hair the snows of 67 years had whitened, whose modest and unassuming nature did not promise vigorous activity, and whose meager knowledge of politics seemed to foredoom his defeat, Senator Taylor campaigned for the honor with considerable confidence in the result. But when the votes were counted he found that the people of the district had nominated Dr. Wallace and he was elected. That was in 1914. Dr. Wallace served in the 48th General Assembly, which convened in 1915, where he earned the respect and esteem of all the members of that body and justified the confidence reposed in him by the medical profession. After Dr. Wallace died in 1916, two years of his term remained, and in choosing a successor Mr. Taylor was again a candidate, and he was elected to the office largely through the influence of the medical profession of the district. Having assured the physicians that he would support their views on medical and public health legislation, it was quite a shock to them when he voted against their advice on practically every question of this nature that came before the senate. When the optometry bill was finally brought to vote in the senate, in the closing hours of the session, it was Senator Taylor we believe who moved that the bill be put to a vote, and he voted in favor of its passage. Before the result of the vote was announced, however, he changed his vote from affirmative to negative, which would allow him to move a reconsideration of the bill if opportunity presented. He was one of the most bitter opponents of the bill to create a central board for the control of eleemosynary institutions, but he did not have an opportunity to show his attitude on the chiropractice bill be-

cause that measure did not come to a vote in the senate.

Senator Taylor evidently failed to measure up to the expectations of the people in the 6th District, and he certainly was a great disappointment to the medical profession not only in his district but throughout the state. The people therefore refused to return him to the honorable seat that he so earnestly sought, a defeat in which we hope the physicians in the district had as much influence as they had in the previous campaign when they succeeded in having him nominated for the unexpired term.

DRAFT AGE FORTY-FIVE

The extension of the draft age to 45 for active service in the Army will affect 75,000 physicians, according to the estimate made by the American Medical Association. If the bill is adopted by Congress, and at this writing there seems to be no doubt that it will become a law in a short time, many of our members will fall under its provisions. While voluntary enlistment in the ranks has been suspended pending the passage of this bill, the War and Navy departments desire that physicians under 46 shall continue to apply for commissions in the Medical Department, but of course if they fail to apply for commissions they will then be drafted as ordinary citizens. Under the caption, "The Selective Service Applied to Physicians," the *Journal of the American Medical Association*, August 17, has analyzed the question so thoroughly that we quote the editorial in full:

THE SELECTIVE SERVICE APPLIED TO PHYSICIANS

The proposed Selective Service Law, if the age limit is raised to 45, will affect 75,000 physicians. The bill as introduced by Senator Chamberlain and Mr. Dent, August 5, makes no mention of physicians as a class; there is nothing to indicate that a physician will be treated differently from any other man. Such speculation as has been made on the subject, and it would fill reams of paper, has concerned itself chiefly with the views advanced by Secretary Baker, Provost Marshal-General Crowder and Chief of Staff Peyton March. As stated by Secretary Baker, it is desired to prevent "the disruption of the industry of the country and the impairment of the efficiency of the various governmental agencies which would feel the indiscriminate enlistment of men up to the age of 45."

It has been suggested that the new law will provide for the utilization of the man power of the nation to the best advantage, although there is nothing in the bill, as we read it, that provides for any different method of applying the selective service principles than that which has heretofore governed the disposition of those under 31 years of age. In any event, as the matter affects physicians, certain points are clear: It is quite probable that physicians on local and district

boards will be exempted during the continuance of such service; in fact, the Provost Marshal-General has so intimated. It is also obvious that physicians under 45 years of age, physically fit, without dependents, will be subject to conscription, as is now the case. It is likely that physicians with dependents, who have independent means, and whose families are therefore not dependent on the physicians' professional income for support, will be subject to conscription.

It is not so obvious what will be done with the physician under 45 years of age, physically fit, whose social conditions are such as, for an ordinary man, would warrant claim for exemption on account of dependency. It has been repeatedly suggested that physicians could not advance a plea for exemption on the grounds of dependency since they are eligible for a commission and the salary of a commissioned officer is sufficient to support a family. As a matter of fact, it is reported that local boards in some communities have refused to exempt physicians on the ground of dependency for this very reason. On the other hand, Col. J. S. Easby-Smith of the Provost Marshal-General's Office, at the meeting on the selective service regulations at the last annual session of the American Medical Association, said:

You are considering his case not from the standpoint of a man that is to be commissioned in the Medical Reserve Corps. You are considering him as a man, a drafted man who will get \$30 a month and that the government will allow \$15 and add to it \$15 for a wife. You cannot consider the probability that a medical man who is drafted is going to get a commission. I think you would have to treat him as you would any other registrant from that standpoint.

The proposed increase of the draft ages will perhaps not solve the medical problems of the civilian community and of the Army as easily as they have apparently been solved in England by the application of selective service. In that country, as was pointed out last week, all physicians are called up by the Central Medical War Committee and given the option of taking such civilian medical service as the Central Medical War Committee may assign to them, or of being turned over to the military authorities for commission. In that way the civilian needs of the community, as well as those of the Army, are provided for. While Great Britain is small in area as compared with the United States, at the same time there seems to be no serious obstacle to putting into effect practically the same general scheme here. Of course, it must be remembered that owing to the lax methods of education and licensure in the past, there are some physicians who, although licensed to practice in the state in which they reside, are not able to meet the professional requirements of the Surgeon-General's Office for a commission in the Medical Department of the Army. It is quite probable, however, that there are comparatively few of these within the proposed draft age. It would seem possible, therefore, to formulate regulations which would receive the approval of the Surgeon-General of the Army and of the Provost Marshal-General which would practically place all physicians of draft age under the jurisdiction of the Surgeon-General of the Army. It is the Medical Department of the Army that is primarily interested. The Navy has all the men it needs, and it is the policy of the Bureau of Medicine and Surgery of the Navy not to commission more men than can be put into active service. Placing all the physicians of the country, under 45, at the disposal of the Surgeon-General of the Army would make easy the solution of the problem of securing the required number of medical officers without seriously interfering with the needs of the civilian population, institutions, colleges and hospitals.

NEWS NOTES

PRESIDENT OVERHOLSER has appointed Dr. Franklin E. Murphy of Kansas City councilor of the 13th District, to act as chairman of the Judicial Council and of the Executive Committee, to fill the vacancy caused by Dr. McComas being called into active service in the Army.

ST. JOSEPH Health Department has begun the publication of a monthly bulletin for distribution among the citizens to inform the people about health conditions. This is a progressive movement and was initiated by Dr. H. DeLameter, city health officer, who will edit the publication.

SURGEON-GENERAL GORGAS estimates that the new law increasing the rank of commissioned officers in the Medical Reserve Corps of the Army will give ranks in that corps as follows: 2 major-generals, 4 brigadier-generals, 675 colonels, 1,158 lieutenant-colonels, 5,063 majors, 14,374 captains and lieutenants.

DR. MAZYCK P. RAVENEL of Columbia, professor of preventive medicine at the State University, who was commissioned major in the Medical Reserve Corps some time ago, has recently been promoted to the rank of lieutenant-colonel, National Army. He is located at the headquarters of the 40th Division, Camp Kearny, Calif.

THE Heyden Chemical Works of New Jersey, which owns the exclusive use in this country of many valuable patents and formulas of drugs, has been taken over by the alien property custodian after it had been established that the company was owned by Germans, we learn from the *Official Bulletin*. The patents, processes and formulas will be Americanized and the company directed by an American board of directors.

THE Welfare Board of St. Joseph, of which Dr. Daniel is chairman, received a check from the trustees of the Noyes Hospital recently refunding to the board the amount it had paid to the hospital for the care of indigent sick during the six months ending Jan. 31, 1918. The trustees requested that the amount of money refunded be not disclosed. It represented a considerable sum and will enable the welfare board to extend relief in other directions.

IN July the health of the American troops, both at home and abroad, set a world's record for low death rate. The deaths from diseases among the soldiers for the week ending July 26 were at the rate of 1.9 per thousand a year, a

record that Surgeon-General Gorgas says has never been surpassed by any military establishment. The best previous rate was 20 per thousand attained by the Japanese in the Russo-Japanese War. The annual death rate for civilians of military age is 6.7 per thousand.

GOVERNOR GARDNER has appointed Dr. A. W. McAlester of Columbia a member of the State Board of Health to take the place of Dr. J. W. Ferguson who has joined the Medical Reserve Corps of the Army. The governor also re-appointed Dr. E. P. North of St. Louis, Dr. T. A. Son of Bonne Terre, Dr. T. H. Wilcoxon of Bowling Green, whose terms expired July 1. The other members of the board are: Dr. W. A. Clark, Jefferson City; Dr. T. W. Cotton, Van Buren, and Dr. Geo. H. Jones, Jefferson City, secretary of the board.

FROM *Science* we learn that one of the most complete hospitals in the world, expected to take a large part of the work of rehabilitating American soldiers wounded overseas, is being erected in Detroit by Henry Ford at a cost of \$3,000,000. The hospital is being built on a twenty-acre tract of land and will have a floor space of 50,000 square feet. It will be a four-story structure, with the exception of the diagnostic building placed in the center, which will be six stories high. There will be 1,300 windows in the building, forty porches around it, and a roof garden.

DR. A. R. MCCOMAS of Sturgeon, councilor of the 9th District, and chairman of the Judicial Council, has been called into active service and assigned to take charge of a surgical ward at the post hospital, Fort Leavenworth. His friends tendered him a farewell dinner at Sturgeon on July 11. He was commissioned as captain. Other officers of the Association who have been recently called to the service are: Dr. W. J. Ferguson of Sedalia, councilor of the 17th District, captain, assigned to Fort Oglethorpe; Dr. A. H. Hamel of St. Louis, councilor of the 20th District, captain, assigned to Fort Benjamin Harrison.

THE Province of Ontario, Canada, has recently amended its license act by granting wider powers to licensing boards in the control of preparations containing alcohol, including patent medicines. Under this amendment, license boards may submit samples of such preparations to the provincial board of health for analysis, and if that board finds that the medical ingredients are not sufficient to prevent the preparation from being consumed for the alcohol contained in them, their sale may be forbidden. All the well known patent medicines containing alcohol in any considerable proportion will be submitted to the board of health for analysis.

On August 10 a memorial statue to the late Dr. Edward L. Trudeau was unveiled. Dr. Trudeau, as undoubtedly most of our members will remember, was the founder of the Adirondack Cottage Sanatorium at Saranac Lake, N. Y., now known as the Trudeau Sanatorium. He began practice in New York in 1872, but developed tuberculosis which forced him to reside in the Adirondack Mountains. In 1884 he established a sanatorium for the treatment of incipient tuberculosis in working men and women, it being the first institution of that kind in this country. In 1894 he established the Saranac Laboratory for research work in tuberculosis. The statue is the gift of former patients of the sanatorium.

OUR advertising pages now carry the announcements of two additional laboratories conducted, of course, by responsible, thoroughly competent and reliable firms. We refer to the announcement of the St. Louis X-Ray Laboratory, located in the Metropolitan Building, with Andre G. De Weal, roentgenologist, in charge of the institution. Mr. De Weal—he is one of the few trained roentgenologists who have not taken a medical degree—is roentgenologist at the St. Louis University Medical School, and will limit his work exclusively to roentgen-ray diagnosis. The other laboratory is the Cutter Laboratory, of Berkeley, California, their slogan "The Laboratory That Knows How." They come to us highly recommended as an institution that has earned an enviable reputation on the Western coast. We invite the attention of all our members to these announcements in the advertising pages.

THE War Department authorizes the statement from the office of the Surgeon-General that, at the request of General Pershing, twenty additional nutrition officers have gone to Europe to supervise rationing of the soldiers of the American Expeditionary Forces and to introduce methods that will further protect the food of the troops from waste, spoilage and contamination. This brings the total of such officers now on duty in England and France to twenty-nine. The first six of these specialists went abroad in March. Their work was so satisfactory that in a few weeks more were asked for. The investigations made by these men resulted in improved mess conditions, both in camp and in the trenches, and demonstrated the necessity for continuous supervision, hence the recent sailing of the twenty. One of the principal problems facing these men is the adjusting of the present garrison ration to current needs. This ration was fixed long before the present conditions of modern warfare, and experience has shown that adjustments must be made in order to feed the troops satisfactorily without waste or spoilage.

THE Dr. J. H. McLean Medicine Company of St. Louis was found guilty and fined \$200 and costs in the federal court at St. Louis for misbranding Dr. J. H. McLean's Liver and Kidney Balm. The announcement of this fine is contained in the report of the Bureau of Chemistry for August 3, which says further:

"Analysis of a sample of the article by the Bureau of Chemistry showed that the product was a weak alcoholic preparation, containing small amounts of vegetable extractives and of sugar and a trace of carbonates.

"It was alleged in substance in the information that the article was misbranded for the reason that certain statements appearing on the label on the bottles and cartons falsely and fraudulently represented it as a remedy for the treatment of diseases and disorders of the liver, kidney and urinary organs, dropsy, inflammation of the kidneys and bladder, incontinence of urine, bed-wetting of children, rheumatism, leucorrhoea or whites, irregular menses, weakness in urinary organs, and pains in the back, gall-stones, diabetes, and Bright's disease; as a remedy for difficulty in passing urine and suppression and retention of urine, as a remedy for the treatment of rheumatism and as a cure for rheumatism, as a remedy for the cure of gout, sciatica, lumbago and neuralgia, and as a remedy for gravel, and female diseases and disorders, when, in truth and in fact, it was not."

The company has appealed to the United States Circuit Court.

THE Medical Department of the Army through the National Research Council, will shortly issue an appeal to American colleges and universities urging them to alter their curriculum so that third and fourth year students may receive special training which will enable them to qualify as officers and for other work in the Medical Department.

The appeal will be sent to all the principal colleges and universities in the country, but as it is realized that important institutions may not for various reasons receive the appeal, the request is made that all directing heads of such institutions write to either Dr. Richard M. Pearce, of the National Research Council, Washington, or to the Division of Laboratories, office of the Surgeon-General, Washington, for details of the proposed plan.

These colleges will render valuable assistance to the government by offering these special courses to their students who will enter the Army when they become of age or in the event that they volunteer before that time. The students desired are those who are taking the various scientific courses. The course proposed by the Medical Department should appeal to men who are specializing in biology, zoology, plant pathology, and in industrial and agricultural bacteriology.

In a number of institutions the necessary courses can be arranged by a simple modification of the already existing course in bacteri-

ology with added emphasis on special subjects of value to the Army.

After completing such courses arrangements for enlistment can be made through the Surgeon-General's Office if the applicant is under draft age, and if of draft age he can be inducted into the service and assigned where his special training will be of value.

This plan has already been tested in two colleges and the success attained has led the Medical Department to apply it to as many colleges as possible. From one such institution every man taking the modified course was admitted directly into the Army and went to one of the training schools, where a portion of them will later qualify for commissions in the Sanitary Corps. Others have qualified for positions at field or mobile laboratory units and as assistants in base and evacuation hospitals.

MEMBERSHIP CHANGES, AUGUST

NEW MEMBERS

Brown, L. E. J., Lewiston.
 Eggers, Gustave C., Clayton.
 Elders, Frank A., Bloomsdale.
 Emmons, F. H., Auxvasse.
 Hatcher, E. D., Fulton.
 Hyder, Ira F., Excelsior Springs.
 Jose, J. E., Jefferson City.
 McArthur, A. W., Chillicothe.
 McCoy, W. B., Gentryville.
 McNearney, Joseph, Jefferson City.
 Meyer, A. G., Ste. Genevieve.
 Oberkrom, L. W., Readsville.
 Reich, J. L., Altamont.
 Shanks, A. L., Hannibal.
 Smith, Norris A., Princeton.
 Strieby, U. G., Brownington.
 Trumpour, Roswell H., Des Pere, R. D., Webster Groves.
 Tyler, R. Seaton, Dunksburg, R. D. Knob-noster.
 Williams, J. E., Bourbon.

CHANGES OF ADDRESS

Newton Amos, Lister Bldg., to 324 University Club Bldg.
 Francis M. Barnes, Jr., Humboldt Bldg., to University Club Bldg.
 O. F. Bradford, Columbia, to Fayetteville, Ark.
 C. A. Brown, 1000 Rialto Bldg., to 602 Ridge Arcade, Kansas City.
 Leo Caplan, 407 Lister Bldg., to 5224 Berlin Ave.
 Howard Carter, Webster Groves, to Marine Hospital, St. Louis.
 L. C. Chenoweth, Webb City to Joplin.

W. L. Clapper, Delmar Bldg., to 910 University Club Bldg., St. Louis.

H. B. Coleman, 3105 E. 18th St., to 2600 E. 15th, Kansas City.

H. C. Crowell, 2454 Forest Ave., Kansas City, to 87th and Brooklyn, Dodson, Mo.

E. Lee Dorsett, Wall Bldg., to 505 University Club Bldg., St. Louis.

R. H. Ferguson, East Las Vegas to Sante Fe, N. M.

J. J. Houwink, 3821 Westminster Pl., to Metropolitan Bldg., St. Louis.

Jay H. Lamb, Centerville, Mo., to La Buco, Ala.

H. H. Look, 625 Bryant Bldg., 708 W. 12th St., Kansas City.

H. L. Luckey, 2625 Marshall Ave., 7277 A. Manchester, St. Louis.

R. E. Martin, White Oak, to Senath.

Claude C. Price, 713 Lathrop Bldg., Oswego, Kan.

F. T. Reyling, 314 Argyle Bldg., to 1230 Rialto Bldg., Kansas City.

G. A. Rush, Grand Ave. Temple, 219 Argyle Bldg., Kansas City.

J. W. Shaw, 2420 N. Jefferson Ave., to 3505 N. Grand Ave., St. Louis.

Abraham Sophian, German Hospital, 404 Argyle Bldg., Kansas City.

H. E. Thompson, 309 Argyle Bldg., to 1020 Rialto Bldg., Kansas City.

J. H. Thompson, 625 Bryant Bldg., to 406 Bryant Bldg., Kansas City.

R. H. Underwood, 3900 Woodlawn Ave., to 3773 Flora Ave., Kansas City.

Martin Van Raalte, Franklin Ave., to Railway Exchange Bldg., St. Louis.

A. Weinberg, 513 Commerce, to 726 Independence, Kansas City.

REINSTATED

Fred L. Hinkley, Stanberry.

TRANSFERRED

Frank L. Whelpley, St. Louis, transferred from St. Louis M. S. to Wayne County M. S., Goldsboro, N. C.

Frederick H. Kampf, St. Louis, transferred from St. Louis M. S. to Chicago M. S.

W. B. Hight, Queen City, transferred from Schuyler County M. S. to Polk County M. S. of Iowa.

DIED

Charles E. Bauer, St. Louis.

J. L. Burke, Laclede.

Thos. S. Hawley, St. Louis.

Guy A. Tull, Kansas City.

MISCELLANY

IN DEFENSE OF VENEREAL NOSTRUMS

The accusation that the medical profession generally and the American Medical Association in particular is opposed to the sale of all medicaments of the "home-remedy" type, THE JOURNAL has repeatedly denied. It has stated that it believes that under present economic conditions there is a place for remedies of this sort and has suggested certain fundamental principles which should govern the sale of products of this kind. One of these principles is that no preparation should be sold for the treatment of those diseases that are so dangerous to the individual or to the community that they should not be self-treated. The reasonableness of this requirement is so obvious that one would imagine it would be accepted without question.

The raising of the new army has brought to public attention certain facts that, under normal conditions, might be less patent. Those dealing with the problem of the control of venereal diseases are some of them. In the attempt to prevent the spread of venereal disease and to minimize the danger to health of those suffering from it, it has long been urged that the self-treatment of gonorrhoea and syphilis is unjustified, and, *ergo*, that the sale of products for such self-treatment is unwarranted. The majority of decent druggists agree wholly with this stand. Not so that spokesman of the "patent medicine" interests, the *National Druggist*. In its July issue this publication thrashes itself into a verbal fury nearly four pages long against the suggestion which, it claims, emanates from a "Prussianized clique of medical autocrats." Says this representative of the nostrum interests:

"But the latest and, perhaps, the most insidious, application of their knowledge of popular psychology, of their policy of opportunism, is seen in the effort which is now being made to prohibit the sale by druggists of medicines for the treatment of the so-called "private" diseases. There is, of course, not the slightest valid reason why a person, if he so elects, should be deprived of the right to buy and use, or why the druggist should be forbidden to sell, a remedy for one of these diseases than for any other disease or class of diseases."

There is, of course, the best and most obvious of reasons why the public should not attempt to self-treat contagious diseases that are a menace both to the individual and to the community. But any law looking to that result would put the exploiters of the venereal nostrums out of business! The *National Druggist*, after denouncing the American Medical Association and the medical profession, then goes on to explain what the druggists may do should laws be enacted by the various legislatures and be sustained by the courts. Says this drug journal:

"Suppose, which is inconceivable and we believe impossible, the courts should sustain these laws? Even then they could not extend to and embrace any stock of such preparations that the druggist may have on hand at the time the law is enacted. In short, the legislature cannot make a retro-active law of the kind, so as to destroy property in existence at the time of its passage. This principle is so well established that the druggists may confidently accept and act upon it. There would be, therefore, nothing to prevent his going right ahead and disposing of such of these remedies as he has in stock."

And, apparently, the *National Druggist* sees a way whereby, even when such laws are enacted, they may be evaded by the druggist. Thus:

"But we do not see how such laws can very materially interfere with the sale of remedies for the specified diseases that may be purchased *after* their passage (even granting, for the sake of argument, that they constitute a valid exercise of the police power) provided the druggist sticks to his last, so to speak—by which we mean, if he does not prescribe, recommend or actually sell the remedies *knowingly* for the specified diseases. Take any of these remedies. There is scarcely one of them that is not indicated and prescribed and designed and used for the treatment of various other conditions than those for which it is chiefly intended; and, so, unless the purchaser explicitly states to the druggist that he wants them for, let us say, some venereal disease, there is absolutely nothing to prevent the druggist from supplying them.

"What though the druggist may know that the medicine is customarily used for one of the proscribed diseases—he has no right to *assume* that every purchaser wants it for such a purpose. Indeed, the person calling for it may be only a messenger or an errand boy for some one else." [The italics appear in the original.—ED.]

We wonder how the decent druggists of the country feel after reading such suggestions as those just given. From the large amount of advertising carried by the *National Druggist*—which includes, by the way, in the current issue "Big G," "Knox-It," "C & C Remedy for Men," "Pabst's Okay Specific," etc.—one might get the impression that the publication has more influence in the drug world than seems possible from the editorial pabulum it serves its readers. One thing is certain, if the *National Druggist* does not represent the attitude of the druggists of the country, and we feel sure that it does not, the sooner the druggists repudiate it the better it will be for the honor of that profession.—*Jour. A. M. A.*, Aug. 17, 1918.

COMMISSIONS ACCEPTED IN MEDICAL RESERVE CORPS OF THE ARMY AND NAVAL RESERVE FORCE BY PHYSICIANS IN MISSOURI FROM JULY 20 TO AUGUST 10, INCLUSIVE

Abney, W. L., Blackwater; Abrams, S. F., Altheide, C. H., St. Louis; Alton, G. P., Barry.

Bartlett, E. M., Clarksville; Beaty, J. G., Clinton; Bell, C. T., Maryville; Bellinger, J. E., St. Louis (Navy); Benham, C. E., Tarkio; Blacklock, D. E., King City; Blank, O. E., St. Louis (Navy); Blanks, G. L., Mexico; Bokhof, D. H., West Line; Botts, M., Mexico; Bradley, E. H., Springfield; Brickey, P. A., St. Louis; Broderick, D. E., Kansas City (Navy); Buhman, R., St. Louis; Burdick, J. J., St. Louis; Butzke, E. J., Bowling Green.

Calvert, H. A., Smithville; Cantrell, C. D., Kansas City; Carpenter, E. H., Helena; Carpenter, G. W., Utica; Cary, W. E., Kansas City; Cater, R. M., Marceline; Cecil, G. E., Flat River; Chapman, T. E., Chenoweth, J. A., Joplin; Clancy, J. F., Clemens, J. R., Cleveland, A. H., Clithero, W. H., Coleman, S. R., St. Louis; Coon, E. H., Grand Pass; Counsell, C. M., Kansas City.

Decker, A. J. E., Gray Ridge; DeMenil, H. N., St. Louis; Denman, J. I., Kansas City (Navy); Diekes, G. J., St. Louis; Donaldson, C. O., Kansas City; Dorris, R. P., St. Louis; Drace, C. C., Holcomb; Duckworth, W. H., Sedalia; Dumbould, B. A., Webb City; Duncan, R. E., Kansas City (Navy).

Ebeling, A. W., Warrenton; Eber, C. T., St. Louis; Edmondson, M. T., Fair Grove; Elders, G. W., Hillsboro; Epstein, J. M., Esselbrugge, F. C., Eyermaun, E. H., St. Louis.

Fair, S. W., Belton; Farrell, J. A., St. Louis; Ferguson, L. J., Brookfield; Ferguson, W. J., Sedalia; Fogle, R. L., Otterville; Freeman, J. M., St. Louis.

Gaines, G. W., Rayville; Gaston, R. E., Webster Grove (Navy); Goldberg, D. D., Gorin, M. G., St. Louis; Grace, J. F., Excelsior Springs; Green, J. R., Independence; Greever, B. L., Monett (Navy); Gronoway, T. P., Bevier; Gross, J. H., St. Louis.

Hale, T. H., St. Louis; Harrington, G. L., Independence; Hartley, V. E., Nebo (Navy); Haynes, F. W., St. Louis; Hereford, R. G., Ashley; Higdon, E. F., St. Joseph; Hill, E. C., Smithville; Hines, W. H., Kansas City; Hirschi, W. T., Hoberecht, C. A., St. Louis; Horst, O. C., Springfield; Hoxsey, T. T., St. Louis; Hudson, F. A., Buffalo; Hyndman, C. E., St. Louis.

Jacobi, F. E., Jacobs, M. W., St. Louis; James, E. F., Springfield; James, F., Sheldon; Janes, V. B., Cameron; Jones, W. G., Lincoln.

Kearney, E. F., Oregon; Kirkham, A., Excelsior Springs; Klein, W. C., Kansas City; Kleinschmidt, C. C., St. Louis; Knabb, A. D., Springfield; Knox, A. C., Koogler, J. F., Kansas City; Krebs, F. J. V., Kring, E. V., St. Louis.

Ladd, F. H., St. Joseph; Lavan, J. L., St. Louis (Navy); Levens, W. B., Creighton; Liberman, D. L., St. Joseph (Navy); Lichtenberg, J. S., Kansas City; Lionberger, J. R., Boonville; Lippe, M. J., St. Louis; Look, H. H., Kansas City; Lucas, H. R., Joplin (Navy); Luman, F. E., Baring; Lund, H. G., St. Louis.

Major, H. S., Fulton; Marder, J. L., St. Louis; Matlock, W. R., Sedalia; Maxwell, H. S., Hopkins; McAlester, A. W., Jr., McCartney, O. P., Kansas City; McComas, A. R., Sturgeon; McCubbin, J. B., Fulton; McDonald, J. G., Ulrich; McGhee, H. E., Kansas City (Navy); McIntire, J. C., Meisch, H. W., St. Louis; Menninger, K. A., Kansas City (Navy); Meredith, J. J., St. Louis; Meredith, O. O., Breckenridge; Middleton, J., Kansas City; Missimore, L. E., St. Louis; Moennighoff, F. J., Odessa; Morley, F. R., Sedalia; Moulder, J. D., Linn Creek; Murphy, E. S., St. Louis; Myer, M. W., Columbia; Myerdick, A. H., St. Louis.

O'Connell, J., St. Louis; Ogilvie, F. L., Blodgett; O'Keefe, C. D., Hannibal; O'Kelley, F. M., Carterville; Orr, C. A., Mendon; Owens, J. L., Owens, P. H., Kansas City.

Paul, T. M., St. Joseph; Peelor, E. C., Lowry City; Peters, M. L., Cameron; Pfeffer, F. J., St. Louis; Pierce, D., Newark; Pierce, L. J., Independence; Porter, A. L. (Navy); Price, C. C., Pugsley, F. N. (Navy), Kansas City.

Randle, H. T., Rassieur, L., St. Louis; Reynolds, S. D., Gower; Rhodes, C. C., Kansas City; Rice, F. W., St. Louis (Navy); Robb, E. F., Hopkins (Navy); Roberts, J. L., Kansas City; Rudd, W. E., Salem; Ruhl, I. E., Rush, G. A., Kansas City.

Sage, E. S., Salisbury, W. J., Salter, J. C. (Navy), St. Louis; Sampson, C. M., St. Joseph; Schilett, T. S., Schuck, A., Scott, E. A., Senseney, E. T., Short, U. S., St. Louis; Simmons, C. C., Bunker; Simmons, R. R., Moberly (Navy); Skinner, J. O., Kansas City (Navy); Slaughter, F. M., St. Louis; Smith, M. D., Prattville; Sparhawk, W. J., St. Louis; Stapp, J. H., Hardin; Statler, W. K., Oakridge; Steinle, G. H., St. Louis; Stokes, J. B., Excello; Stone, C. A., St. Louis; Stone, W. E., Columbia (Navy); Swarts, J. L., St. Louis.

Thompson, A. M., St. Louis; Thompson, J. E., Nelson; Thurman, F. D., St. Louis; Timmerman, A. R., St. Joseph; Titsworth, G., Sedalia; Tucker, C. A., Springfield; Twyman, G. T., Independence; Tyree, J. I., Kansas City (Navy).

Underwood, M. L., St. Joseph; Underwood, R. H., Kansas City; Upshaw, O. T., St. Louis.

Van Eman, F. T., Kansas City.

Wagner, W. H., Berger; Walker, E. R., Sedalia; Walker, J. O., Kansas City (Navy); Wall, H. M., Windsor (Navy); Wehr, C. W., Weinberg, A., Kansas City; Werth, D. S., Kirkwood; West, W. M., Monett; Westlake, S. B., Whitaker, G. W., Wichmann, A. G., Wiener, M., Wiesner, B. J., Wilcox, B. H., St. Louis (Navy); Willis, J. B., Pattonsburg; Wobus, R. E., Winterer, C. H., St. Louis.

VOLUNTEER MEDICAL SERVICE CORPS— RULES OF THE ORGANIZATION

1. *Name*.—The name of the organization shall be the Volunteer Medical Service Corps of the United States.

2. *Object*.—a. The object of the Corps shall be to establish an emergency medical organization to perform, when required, such civic and military duties as are not provided for.

b. *Services of members* will be called for and rendered in response to request to a Central Governing Board from the Surgeon-General of the Army, the Surgeon-General of the Navy, the Surgeon-General of the Public Health Service, the General Medical Board of the Council of National Defense, or from other duly authorized departments or associations.

3. *The Corps*.—The Corps shall consist of all members of the organization. The general management of the Corps shall be vested in a Central Governing Board.

4. *Central Governing Board*.—The Central Governing Board shall be appointed Council of National Defense and approved by the President.

5. *Officers*.—The officers of the Corps shall be a president, a vice president, and a secretary, and shall be appointed from among the members of the Central Governing Board. These officers shall constitute the executive committee of the Central Governing Board, and shall direct the activities of the Corps.

6. *State Governing Boards*.—a. The State Governing Boards shall consist of the members of the State Committees, Medical Section, Council of National Defense. The State Committees shall select, subject to the approval of the Central Governing Board, five to ten of their members who are eligible for election in this Corps to act as the executive committee of the Volunteer Medical Service Corps in the respective States.

b. The duties of the executive committee of the State Governing Board shall be to consider applications for membership in the Corps from the respective states and to submit recommendations regarding these applications to the Central Governing Board.

c. The State Governing Board shall aid in the work of the executive committee and perform such other duties as may hereafter be deemed essential by the Central Governing Board to accomplish the purpose for which the Corps was created.

7. *Membership*.—First, such physicians shall be eligible for membership in this Corps as would be accepted in the Medical Reserve Corps were it not

for (a) physical disability; (b) over age (55); (c) essential public need; (d) essential institutional need; (e) dependents.

Second, women physicians are eligible.

Third, application for membership in the Volunteer Medical Service Corps shall be made on blanks furnished for that purpose by the Central Governing Board. The completed form shall be returned to the Central Governing Board for proper classification according to training and special fitness.

8. *Method of Election*.—a. The members of the Corps shall be graduates in medicine who are licensed to practice medicine in their respective states, who have made application for membership, who meet the qualification requirements that are now or shall from time to time be established by the Central Governing Board, and who shall be elected to membership by the Central Governing Board.

b. Each physician elected to membership in the Corps shall be designated as a member of the Volunteer Medical Service Corps.

c. It shall be the duty of each member of the Volunteer Medical Service Corps to notify the Central Governing Board when eligibility to the Corps ceases to exist.

9. *Insignia*.—a. Members of the Corps shall be authorized and encouraged to wear the insignia of the Corps.

b. The insignia may be secured by members of the Corps under such regulations as may be determined on by the Central Governing Board.

c. The insignia shall not be loaned to any person not a member of the Corps, nor shall it be worn after notification that eligibility to the Volunteer Medical Service Corps has ceased to exist, and shall be returned on demand of the Central Governing Board.

10. Any member of the Corps may be expelled for conduct which, in the opinion of the Central Governing Board, is derogatory to the dignity of the Corps or inconsistent with its purposes.

11. *Authorization*.—The organization and insignia have been authorized by the Council of National Defense.

The Central Governing Board according to a recent announcement consists of the following: Surgeon-General William C. Gorgas, U. S. A.; Surgeon-General William C. Braisted, U. S. N.; Surgeon-General Rupert Blue, U. S. P. H. S.; Provost Marshal-General Crowder; Dr. Franklin Martin, Council of National Defense; Dr. Edward P. Davis, president, Volunteer Medical Service Corps; Dr. John D. McLean, vice president; Admiral Cary T. Grayson, U. S. N., Dr. F. F. Simpson, Dr. Frank Billings, Dr. H. D. Arnold, Mr. W. Frank Persons, Red Cross; Dr. Victor C. Vaughan, Dr. William H. Welch, Dr. Robert L. Dickinson, chief of staff's office; Col. R. B. Miller, U. S. A., chief of Personnel Division; Surgeon R. C. Ramsdell, U. S. N., chief of Personnel Division; Col. James Eashy-Smith, executive officer; Dr. Joseph Schereschewsky, Dr. C. H. Mayo, Dr. William Duffield Robinson, Dr. George David Stewart, Dr. Charles E. Sawyer, Dr. Duncan Eve, Sr.

The Medical Section of the State Committee, Council of National Defense, is the state governing board for Missouri, from the members of which an executive committee of five was elected to pass on the applications for membership in the Corps from Missouri. This executive committee is composed of the following: Dr. J. D. Griffith, Kansas City, chairman; Dr. E. J. Goodwin, St. Louis; Dr. Paul Y. Tupper, St. Louis; Dr. Woodson Moss, Columbia; Dr. F. B. Fuson, Springfield.

LICENSED BY THE MISSOURI STATE BOARD OF HEALTH

The following were granted licenses to practice medicine and surgery in Missouri, on examination before the Missouri State Board of Health, on June 17, 18, 19, 1918.

LICENSED BY EXAMINATION

Name	Medical School	Home Address
Alvis, Bennett Young.....	St. Louis University.....	St. Louis
Bauer, Gustave Lewis, Jr.....	St. Louis University.....	Belleville, Ill.
Beier, Henry.....	St. Louis University.....	Gotebo, Okla.
Bellinger, James Edward.....	St. Louis University.....	St. Louis
Blank, Oscar Ernest.....	St. Louis University.....	Granite City, Ill.
Booker, Lee Walls.....	Howard University.....	Kansas City, Mo.
Broun, Goronwy Owen.....	St. Louis University.....	Mobile, Ala.
Cernik, Stanley John.....	St. Louis College Phys. & Surg.....	Erin, N. Y.
Cook, Thomas Francis.....	St. Louis University.....	Rayville, Mo.
Copher, Glover H.....	Washington University.....	Troy, Mo.
Costello, Joseph Patrick.....	St. Louis University.....	Kewanna, Ind.
Cowan, Robert Dinwiddie.....	St. Louis University.....	Aldrich, Mo.
Cresswell, George Francis.....	Washington University.....	Potosi, Mo.
Dean, James Reeve.....	Washington University.....	St. Louis
Dierker, Bernard Joseph.....	St. Louis University.....	West Point, Ia.
Diethelm, Martin Walter.....	St. Louis University.....	St. Louis
Dunham, Leslie Herman.....	St. Louis University.....	Pattonburg, Mo.
Eimer, Charles Eugene.....	St. Louis University.....	Belleville, Ill.
Farrell, James Augustine.....	St. Louis College Phys. & Surg.....	St. Louis
Falk, Oswald Pleus.....	St. Louis University.....	St. Louis
Franke, Florent Edwin.....	St. Louis University.....	Newton, Ill.
Framson, Louis George.....	St. Louis University.....	St. Louis
Gallagher, Vincent John.....	St. Louis University.....	St. Louis
Galvin, Joseph Emmit.....	St. Louis University.....	Oelwein, Iowa
Gillett, Wilbur Goodson.....	Washington University.....	Wichita, Kan.
Goeke, Joseph Francis.....	St. Louis University.....	Kirksville, Mo.
Greever, Boyd Lorens.....	St. Louis University.....	Monett, Mo.
Grosskreutz, Joseph Albert.....	St. Louis College Phys. & Surg.....	St. Louis
Hansel, French Keller.....	St. Louis University.....	Granite City, Ill.
Hartley, Ulysses Eugene.....	St. Louis University.....	Nebo, Mo.
Healy, Roscoe Howland.....	Northwestern University.....	Denver, Colo.
Hedges, Edmund Henry.....	St. Louis University.....	Upper Sandusky, Ohio
Jansen, Richard William.....	St. Louis College Phys. & Surg.....	St. Louis
Kearby, Howard Denton.....	St. Louis University.....	Savannah, Mo.
King, Raymond Charles.....	St. Louis University.....	Toledo, Ohio
Kuntz, Albert.....	St. Louis University.....	St. Louis
Lill, Joseph Charles.....	St. Louis University.....	Fort Wayne, Ind.
Lounsberry, Chancel Ray.....	St. Louis University.....	Marshalltown, Iowa
Mahoney, Francis Joseph.....	St. Louis University.....	Cleveland, Ohio
Malone, John Thomas, Jr.....	National Univ. Arts and Sciences.....	Louisville, Ky.
Maxey, Hugh Worthington.....	Washington University.....	Mt. Vernon, Ill.
Mendelsolm, Jacob Edgar.....	Maryland Medical College.....	Chicago
Mendoza, Elsa Lange.....	St. Louis College Phys. & Surg.....	St. Louis
Muenzer, Joseph Anthony.....	St. Louis University.....	Toledo, Ohio
O'Brien, Harry Malcolm.....	St. Louis University.....	Cleveland, Ohio
O'Connor, Deno Francis.....	Loyola University.....	Verona, Wis.
Overstreet, Walter Cunningham.....	St. Louis University.....	Sedalia, Mo.
Pareti, August Joseph.....	St. Louis University.....	New Orleans, La.
Patton, George Andrew.....	Meharry Medical College.....	Nashville, Tenn.
Perry, Wallace Brown.....	St. Louis University.....	Broadwell, Ill.
Pessel, Johannes Friedrich.....	Washington University.....	Belleville, Ill.
Plag, Albert Frederick.....	St. Louis University.....	St. Louis
Pulskamp, Marinus Henry.....	St. Louis University.....	Celina, Ohio
Rhea, Clarence Ward.....	St. Louis University.....	St. Louis
Rogers, Cyril Henry.....	St. Louis College Phys. & Surg.....	St. Louis
Ross, Herman Charles.....	St. Louis University.....	St. Louis
Rupe, Wayne Arthur.....	Washington University.....	Rockport, Mo.

LICENSED BY EXAMINATION

Name	Medical School	Home Address
Scheffsky, Albert H. H. L.	St. Louis College Phys. & Surg.	St. Louis
Schlernitzauer, Joseph A.	St. Louis University	St. Louis
Schroeder, Rudolph Ernest	St. Louis College Phys. & Surg.	St. Louis
Settle, Francis Boas	St. Louis University	St. Louis
Shakelford, Horace Harvey	Washington University	St. Louis
Smith, James Wycliffe	Meharry Medical College	St. Louis
Stevens, James Henry	Barnes Medical College	Cash, Ark.
Stone, William Ernest	Washington University	Columbia, Mo.
Striegel, Bernard Francis	St. Louis University	St. Louis
Stucki, James Michael	St. Louis University	St. Louis
Terrill, Edwin Harold	Washington University	Vandalia, Mo.
Tesson, James Albert	Washington University	Kansas City, Mo.
Thomas, Jacob Earl	St. Louis University	St. Louis
Unrein, Gerard Cassian	St. Louis University	Hays, Kan.
Van Nest, Alfred Earl	St. Louis University	Jackson, Mich.
Vieregg, Frank Ray	Kansas University	Kansas City, Mo.
Voigt, Ralph Arthur	St. Louis College Phys. & Surg.	St. Louis
Wilcox, Beryle Harrison	St. Louis University	St. Louis
Wild, Willard Wilfred	St. Louis University	Carbon, Iowa
Yoell, Rodney Alexander	St. Louis University	St. Louis

LICENSED BY RECIPROCIITY

Name	Reciprocating State	Intended Residence
Davis, Josaphyne Eshom	Kansas	Ottawa, Kan.
Johnson, Erskine D.	Tennessee	St. Louis
Marrriott, Williams McKim	Illinois	St. Louis
Martin, John Neal	Illinois	Bogard, Mo.
Midgley, Robert John	Kansas	Independence, Mo.
Miller, Frank O'Hara	Kansas	St. Louis
Shores, Clarence Elmar	Tennessee	St. Louis
Stokes, Bessie	Illinois	Orrick, Mo.
Yerby, Walter W.	Tennessee	St. Louis

ORDERS TO MISSOURI PHYSICIANS IN THE MEDICAL RESERVE CORPS OF THE ARMY FROM JULY 20 TO AUGUST 10, INCLUSIVE

Abney, Lieut. William L., Blackwater, to Fort Riley, for instruction.

Althaus, Lieut. Carl J., St. Louis, to Fort Riley, for instruction.

Altheide, Capt. Charles H., St. Louis, to Camp Travis, Fort Sam Houston, Texas, for duty.

Alton, Capt. Glover F., Gashland, to Fort Riley, for instruction.

Bartlett, Capt. Ezekiel M., Clarksville, to Fort Riley, for instruction.

Beaty, Capt. Joseph G., Huntingdale, to Fort Riley, for instruction.

Bechthold, Lieut. Edmond, St. Louis, to Fort Riley, for instruction.

Beeson, Capt. John P., South West City, to Camp Lee, Petersburg, Va., for duty, from Hoboken.

Bennett, Lieut. Commodore E., Joplin, to Camp Jackson, Columbus, S. C., for duty.

Biggsby, Capt. Frank L., Kirksville, to Camp Jackson, Columbus, S. C., base hospital, from Fort Oglethorpe.

Billeter, Lieut. William J., Bynumville, to report by wire to the commanding general, Central Department, for assignment to duty.

Black, Lieut. James M., St. Louis, to Camp Beauregard, Alexandria, La., base hospital.

Blakesley, Capt. Theodore S., Kansas City, to Mineola, L. I., N. Y., for duty, from Houston.

Boogher, Capt. Frank, St. Louis, to report by wire to the commanding general, Central Department, for assignment to duty.

Boteler, Capt. George McC., St. Joseph, to Camp Beauregard, Alexandria, La., base hospital.

Botts, Capt. McDowell, Mexico, to Camp Gordon, Atlanta, Ga., base hospital, from Army Medical School.

Bradford, Lieut. Oscar F., Columbia, to Rockefeller Institute, for instruction in bacteriology, and on completion to Army School for duty.

Brookes, Lieut. Henry S., St. Louis, honorably discharged on account of physical disability existing prior to entrance into the service.

Buhman, Capt. Rudolph, St. Louis, to Rockefeller Institute, for instruction in bacteriology, and on completion to Army Medical School, for duty.

Burdick, Lieut. Jesse J., St. Louis, to St. Louis, Signal Corps Aviation School, for duty.

Burns, Major Robert, Jr., St. Louis, to Camp Greene, Charlotte, N. C., base hospital, from Fort Snelling.

Butzke, Lieut. Ernest J., Bowling Green, to New Haven, Conn., for duty.

Byler, Lieut. William F., Kansas City, to Fort Riley, for instruction.

Campbell, Lieut. Cecil S., St. Louis, to Camp Grant, Rockford, Ill., for duty, from Camp Greene.

Cantrell, Capt. Cyrus D., Kansas City, to Fort Oglethorpe, for instruction.

Capell, Capt. Clarence S., Kansas City, to Fort Oglethorpe, for instruction.

Carpenter, Capt. Ernest H., Helena, to Fort Riley, for instruction.

Cary, Capt. Walter R., Kansas City, to Camp MacArthur, Waco, Texas, for duty.

Cecil, Capt. George E., Flat River, to report by wire to the commanding general, Central Department, for assignment to duty.

Chaffin, Lieut. Wellman F., Raymore, to report by wire to the commanding general, Central Department, for assignment to duty.

Chenoweth, Lieut. John A., Joplin, to Fort Riley, for instruction.

Clancy, Lieut. James F., St. Louis, to Camp Travis, Fort Sam Houston, Texas, base hospital.

Clapsaddle, Lieut. Clare J., St. Louis, to Camp Joseph E. Johnston, Jacksonville, Fla., base hospital, from Camp Jackson.

Cleveland, Lieut. Andrew H., St. Louis, to Camp Bowie, Fort Worth, Texas, base hospital.

Clithero, Lieut. William H., St. Louis, to Camp Beauregard, Alexandria, La., base hospital.

Cook, Lieut. Ralph L., St. Louis, to Fort McPherson, Ga., for duty, from Camp Beauregard.

Cooley, Lieut. Edward L., St. Louis, to Fort Sheridan, Ill., as orthopedic surgeon, from Fort Slocum.

Counsell, Lieut. Chester M., Kansas City, to Fort Riley, for instruction.

Dabbs, Lieut. David N., Rocky Comfort, to report by wire to the commanding general, Central Department, for assignment to duty.

Darrough, Lieut. John N., Kansas City, honorably discharged on account of physical disability not incident to the service.

Dean, Capt. John McH., St. Louis, to Fort Oglethorpe, Ga., for instruction.

Dean, Lieut. Leslie E., Marysville, to Camp MacArthur, Waco, Texas, base hospital.

Dean, Lieut. William T., St. Louis, to Camp Beauregard, Alexandria, La., for duty, from Fort Riley.

Decker, Lieut. Arthur J., Gray Ridge, to report by wire to the commanding general, Central Department, for assignment to duty.

Donalson, Capt. Clyde O., Kansas City, to Fort Oglethorpe, for instruction.

Downing, Lieut. James L., Oak Grove, to Camp Las Casas, San Juan, Porto Rico, base hospital, from Fort Sill.

Drace, Capt. Charles C., Holcomb, to Fort Riley, for instruction.

Draney, Lieut. Thomas L., St. Louis, to Fort Riley, for instruction.

Dubbs, Lieut. David N., Rocky Comfort, resignation.

Dumbauld, Capt. Bunn A., Webb City, to Camp Dodge, Des Moines, base hospital.

Dysart, Capt. William P., Columbia, to report by wire to the commanding general, Central Department, for assignment to duty.

Epstein, Capt. Jacob M., St. Louis, to Camp Dodge, Des Moines, base hospital.

Esselbruegge, Capt. Frederick C., St. Louis, to Camp Meade, Admiral, Md., base hospital.

Everman, Capt. Edward H., St. Louis, to Fort Riley, for instruction.

Farrell, Lieut. James A., St. Louis, to Williamsbridge, N. Y., for duty.

Ferguson, Capt. Wilson J., Sedalia, to Fort Oglethorpe, for instruction.

Ferris, Lieut. Joseph L., St. Louis, to Fort Riley, for instruction.

Ford, Lieut. Edward, Bloomfield, honorably discharged on account of physical disability existing prior to entrance into the service.

Gebhardt, Lieut. Albert A., St. Louis, resignation.

Goldman, Lieut. Ahbrum M., Kansas City, to Boston, Harvard Graduate School of Medicine, for instruction.

Goldstein, Major Max A., St. Louis, to Fort Riley, for instruction.

Goodson, Lieut. Fenton N., St. Joseph, resignation.

Grier, Lieut. Maurice E., Kansas City, to Fort Riley, for instruction.

Gronoway, Lieut. Terrence P., Bevier, to Fort Riley, for instruction.

Guy, Lieut. Robin J., Paynesville, to Fort Riley, for instruction.

Hahn, Lieut. Charles N., Dunnigan, to Camp Beauregard, Alexandria, La., for duty, from Fort Riley.

Hale, Lieut. Tyre H., St. Louis, to Fort Riley, for instruction.

Hanser, Capt. Herman A., St. Louis, to Fort Riley, for instruction.

Harrison, Lieut. Edmund L., Kansas City, to report by wire to the commanding general, Central Department, for assignment to duty.

Heid, Lieut. Lloyd L., St. Louis, to Fort Riley, for instruction.

Hereford, Lieut. Richard G., Ashley, to Fort Riley, for instruction.

Higdon, Lieut. Edward F., St. Joseph, to Fort Riley, for instruction.

Hill, Capt. Edwin C., Smithville, to Fort Riley, for instruction.

Hiller, Lieut. Frank B., Kansas City, to Camp Lewis, American Lake, Wash., for duty.

Hirschi, Capt. William T., St. Louis, to Camp Dodge, Des Moines, base hospital.

Hudson, Lieut. Frank A., Buffalo, to Fort Riley, for instruction.

Hyndman, Lieut. Charles E., St. Louis, to New York City, Neurological Institute, for instruction.

Ileh, Capt. Otto B., St. Charles, to Fort Riley, for instruction.

Inloe, Lieut. Lawrence D., Jefferson City, to Camp Devens, Ayer, Mass., base hospital, from Camp Pike.

Inman, Lieut. William B., St. Louis, to Fort Oglethorpe, for instruction, from Fort Riley.

Jacobi, Capt. Franklin E., St. Louis, to Camp MacArthur, Waco, Texas, base hospital.

James, Capt. Edwin F., Springfield, to Fort Riley, for instruction.

James, Lieut. Luther S., Blackburn, to Camp Logan, Houston, Texas, base hospital.

Janes, Capt. Vincil B., Cameron, to Fort Riley, for instruction.

Jennings, Lieut. Robert J., Windsor, to Fort Riley, for instruction.

Johnston, Lieut. Elza L., Waverly, to Camp Grant, Rockford, Ill., base hospital.

Kaemmerling, Lieut. Gerhard G., Joplin, to Camp Dix, Wrightstown, N. J., for duty, from Fort Oglethorpe.

Kearney, Lieut. Elmer F., Oregon, to Fort Riley, for instruction.

Kennedy, Capt. Walter U., St. Louis, to Rockefeller Institute, for instruction in the treatment of infected wounds, and on completion to Camp Dix, Wrightstown, N. J., base hospital.

Kirchner, Capt. Walter C. G., St. Louis, to Camp Meade, Admiral, Md., base hospital, from Walter Reed General Hospital.

Klein, Lieut. Walter C., Kansas City, to Camp Lewis, American Lake, Wash., for duty.

Kleinschmidt, Lieut. Clinton C., St. Louis, to Fort Oglethorpe, for instruction.

Koogler, Capt. John Floyd, Kansas City, to Fort Riley, for instruction.

Krebs, Capt. Frank J., St. Louis, to Camp Dodge, Des Moines, base hospital.

Kring, Lieut. Elbert V., St. Louis, to New Haven, Conn., Yale Army Laboratory School, for instruction in bacteriology.

Ladd, Capt. Fred H., St. Joseph, to Fort Riley, for instruction.

Leavy, Capt. Charles A., St. Louis, to Camp Sherman, Chillicothe, Ohio, base hospital.

Leighton, Major William E., St. Louis, to Camp Crane, Allentown, Pa., for duty, from Fort McHenry.

Leonard, Lieut. Arthur C., Kansas City, to Camp Lewis, American Lake, Wash., for duty.

Levens, Lieut. William B., Creighton, to Fort Oglethorpe, for instruction.

- Lockwood, Lieut. William E., Potts, to Fort Riley, for instruction.
- Loeb, Major Hanau W., St. Louis, to St. Louis, for duty, from the Surgeon-General's Office.
- Look, Capt. Henry H., Kansas City, to Newport News, Va., for temporary duty.
- McBride, Major William L., Kansas City, to Fort Oglethorpe, for duty, from Fort Oglethorpe.
- McCall, Capt. Greene D., Fulton, to Camp Dix, Wrightstown, N. J., as orthopedic surgeon, from Lakewood.
- McGennis, Lieut. Patrick, St. Louis, to Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Camp Zachary Taylor.
- McHaffie, Lieut. Charles H., Ash Grove, to Fort Riley, for instruction.
- Meisch, Lieut. Henry W., Manchester, to Camp Gordon, Atlanta, Ga., for duty.
- Mellies, Capt. George A., St. Louis, to Fort Oglethorpe, for instruction.
- Meredith, Capt. Joseph L., St. Louis, to report by wire to the commanding general, Central Department, for assignment to duty.
- Meredith, Lieut. Oscar O., Breckenridge, to Fort Riley, for instruction.
- Meyer, Lieut. Claud B., Buffalo, to Fort Riley, for instruction.
- Miller, Lieut. Charles H., St. Louis, honorably discharged on account of physical disability existing prior to entrance into the service.
- Miller, Lieut. George H., St. Louis, to Fort Riley, for instruction.
- Miller, Lieut. Leslie B., Kansas City, to Fort Riley, for instruction.
- Miller, Capt. Ira H., Louisiana, to Rockefeller Institute, for instruction in the treatment of infected wounds, and on completion to his proper station, from Camp Upton.
- Miller, Lieut. Reginald C. M., Foristell, to Camp Lewis, American Lake, Wash., for duty, from Fort Riley.
- Mills, Lieut. Joseph W., Owensville, to Fort Riley, for instruction.
- Missimore, Lieut. Lewis E., St. Louis, to Fort Riley, for instruction.
- Mitchell, Lieut. Ernest, La Monte, to Camp Dix, Wrightstown, N. J., for duty, from Fort Riley.
- Moennighoff, Capt. Fritz J., Kansas City, to Fort Oglethorpe, for instruction.
- Moreland, Lieut. George H., Kansas City, to Syracuse, N. Y., for duty, from Camp Dodge.
- Morley, Capt. Frank R., Sedalia, to Fort Riley, for instruction.
- Morris, Capt. Robert N., Kansas City, to Fort Oglethorpe, for instruction.
- Moulder, Lieut. John D., Linn Creek, to Fort Oglethorpe, for instruction.
- Mulach, Lieut. Albert A., St. Louis, to Fort Riley, for instruction.
- Murphy, Lieut. Edward S., St. Louis, to Fort Oglethorpe, for instruction.
- Myer, Capt. Max W., Columbia, to Fort Oglethorpe, for instruction.
- Newcomb, Lieut. Charles H., Clinton, to Fort Oglethorpe, for instruction.
- Netherton, Lieut. Earl W., Gallatin, to Fort Riley, for instruction.
- Niedringhaus, Capt. Ralph F., St. Louis, to Fort Oglethorpe, for temporary duty, from Colonia.
- O'Connell, Lieut. John, St. Louis, to Fort Oglethorpe, for instruction.
- Ogilvie, Capt. Fred L., Blodgett, to Fort Riley, for instruction.
- Olsen, Lieut. Henry H., Kansas City, to Fort Riley, for instruction.
- Opie, Major Eugene L., St. Louis, to Camp Cody, Deming, N. M., for temporary duty, from St. Louis.
- Orr, Lieut. Charles A., Ash Grove, to Williams-bridge, N. Y., for duty.
- Osborne, Lieut. Francis H. J., St. Louis, to Garden City, L. I., N. Y., for duty, from Fort Oglethorpe.
- Ottman, Lieut. John C., Craig, to Fort Riley, for instruction.
- Owens, Lieut. Michael J., Kansas City, to Brownsville, Texas, base hospital, from McAllen, Texas.
- Parsons, Lieut. Clyde W., Sweet Springs, to Fort Riley, for instruction.
- Pfeffer, Capt. Francis J., St. Louis, to Camp Gordon, Atlanta, Ga., base hospital.
- Porterfield, Capt. John D., Cape Girardeau, to Camp Travis, Fort Sam Houston, Texas, base hospital.
- Postlethwaite, Lieut. Frank M., Kansas City, to Douglas, Ariz., for duty, from Fort Riley.
- Potter, Lieut. Ambrose E., Springfield, to Camp MacArthur, Waco, Texas, for duty.
- Potter, Capt. William A., Lancaster, to Camp Grant, Rockford, Ill., for duty, from Fort Riley.
- Powers, Capt. John A., Warrensburg, to Hoboken, N. J., base hospital, from Camp Crane.
- Pulliam, Lieut. Madison J., St. Louis, to Camp McClellan, Anniston, Ala., base hospital, from Camp Wadsworth.
- Presnell, Lieut. George W. H., Sikeston, resignation accepted.
- Price, Lieut. Ralph H., St. Louis, to Fort McPherson, Ga., for duty, from Camp Gordon.
- Ragan, Lieut. Stephan H., Kansas City, to report by wire to the commanding general, Central Department, for assignment to duty.
- Rassieur, Capt. Louis, St. Louis, to Camp Cody, Deming, N. M., base hospital.
- Reilly, Lieut. Joseph J., St. Louis, to Garden City, L. I., N. Y., for duty, from Dallas.
- Reilly, Lieut. William S., St. Louis, to Fort Riley, for instruction.
- Rhodes, Capt. Clinton C., Kansas City, to Fort Oglethorpe, for instruction.
- Richards, Capt. Thomas C., Fayette, to Camp Sherman, Chillicothe, Ohio, for duty, from Fort Riley.
- Ricketts, Lieut. Floyd B., Leslie, to Morrison, Va., for duty, from Fort Riley.
- Rider, Lieut. Ernest B., Kansas City, to Camp Cody, Deming, N. M., base hospital.
- Roberts, Capt. James L., Kansas City, to Camp McClellan, Anniston, Ala., base hospital.
- Roberts, Lieut. Sam E., Kansas City, to Dallas, Texas, Signal Corps Aviation School, for duty, from Kansas City.
- Rowlett, Capt. Hugh S., Marysville, to Fort Riley, for instruction.
- Rudd, Capt. William E., Salem, to Fort Riley, for instruction.
- Ruhl, Capt. Irwin E., Kansas City, to Fort Riley, for instruction.
- Rush, Lieut. George A., Kansas City, to Fort Riley, for instruction.
- Russell, Capt. James M., Monett, to Fort Oglethorpe, for instruction.
- Saenger, Capt. Nathaniel, St. Louis, to Camp Shelby, Hattiesburg, Miss., base hospital.
- Salisbury, Lieut. William J., St. Louis, to Fort Riley, for instruction.
- Sampson, Lieut. Chris. M., St. Joseph, to Fort Riley, for instruction.
- Sawyer, Lieut. Alfred L., Fort Fairchild, to Fort Oglethorpe, for instruction.
- Schumacher, Lieut. Harry W., St. Louis, to Fort Oglethorpe, base hospital, from Camp Jackson.
- Schwartz, Lieut. Frederick C., St. Louis, to Fort Oglethorpe, for instruction.
- Scott, Lieut. Allen G., Cardwell, to Camp Upton, L. I., N. Y., for duty, from Fort Riley.
- Scott, Lieut. Elijah A., St. Louis, to Fort Oglethorpe, for instruction.

Sevin, Lieut. Omar R., St. Louis, to Fort McPherson, Ga., for duty, from Fort Oglethorpe.

Sharon, Lieut. Franklin F., Kansas City, to report by wire to the commanding general, Central Department, for assignment to duty.

Simmon, Capt. Charles C., Bunker, to Fort Oglethorpe, for instruction.

Singleton, Lieut. John M., Kansas City, to Fort Riley, for instruction.

Smith, Lieut. Lawrence L., Bethel, to Fort Riley, for instruction.

Smith, Lieut. Merrill N., Fayette, to Fort Ontario, N. Y., base hospital, from Camp MacArthur.

Spalding, Lieut. Lansford M., Orlean, to Camp Beauregard, Alexandria, La., as assistant to camp surgeon, from Fort Riley.

Stapp, Lieut. Joseph H., Hardin, to Fort Riley, for instruction.

Statler, Capt. Will K., Oakridge, to Fort Riley, for instruction.

Telfer, Lieut. George A., St. Louis, to Camp Logan, Houston, Texas, base hospital, from Fort Oglethorpe.

Thurman, Lieut. Joseph L., St. Louis, to Fort Riley, for instruction.

Tierney, Lieut. John L., St. Louis, to Fort Des Moines, base hospital, from Camp Cody.

Timerman, Capt. Arthur R., St. Joseph, to Camp Travis, Fort Sam Houston, Texas, base hospital.

Titsworth, Capt. Guy, Sedalia, to Camp Beauregard, Alexandria, La., base hospital.

Tonelli, Lieut. George L., St. Louis, to Fort Riley, for instruction.

Toomey, Lieut. Thomas N., St. Louis, to Camp Pike, Little Rock, Ark., with the board examining the command for nervous and mental diseases.

Townsend, Lieut. Vincent F., St. Louis, to Camp Sevier, Greenville, S. C., base hospital, from Camp Beauregard.

Turek, Lieut. Alois E., St. Louis, to Newport News, Va., for duty, from Fort Monroe.

Twyman, Lieut. George T., Independence, to Camp MacArthur, Waco, Texas, for duty.

Urbanowski, Lieut. Leon V., St. Louis, to Camp Sherman, Chillicothe, Ohio, as orthopedic surgeon, from Camp Custer.

Underwod, Lieut. Ross H., Kansas City, to Fort Oglethorpe, for instruction.

Van Eman, Capt. Frederick T., Kansas City, to Camp MacArthur, Waco, Texas, for duty.

Vernon, Lieut. William C., Kansas City, to New York City, Hospital for Ruptured and Crippled, for instruction, from Fort Oglethorpe.

Wagner, Lieut. Werner H. Berger, to Camp Travis, Fort Sam Houston, Texas, base hospital.

Walker, Capt. William E., La Monte, to Fort Riley, for instruction.

Weinberg, Lieut. Abraham, Kansas City, to Fort Riley, for instruction.

Wichmann, Capt. August G., St. Louis, to Camp McClellan, Anniston, Ala., base hospital.

Wierner, Major Meyer, St. Louis, to Fort Oglethorpe, for instruction.

Wiesner, Lieut. Bohumil J., St. Louis, to Camp McClellan, Anniston, Ala., base hospital.

Wilhelmi, Lieut. Otto J., St. Louis, to Fort Riley, for instruction.

Will, Lieut. Waldo H., Mehlville, to Camp Lewis, American Lake, Wash., for duty.

Wilson, Capt. Elisha H. G., Cape Girardeau, to Fort Riley, for instruction.

Wobus, Capt. Reinhard E., St. Louis, to Fort Oglethorpe, for instruction.

Yahlen, Lieut. Nathaniel N., St. Louis, to Fort Riley, for instruction.

Young, Lieut. Anthony O., St. Louis, to Fort Oglethorpe, for instruction.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

- Taney County Medical Society, Nov. 17, 1917.
 Webster County Medical Society, Nov. 21, 1917.
 Wright County Medical Society, Dec. 3, 1917.
 Schuyler County Medical Society, Dec. 4, 1917.
 Platte County Medical Society, Dec. 5, 1917.
 Madison County Medical Society, Dec. 17, 1917.
 Livingston County Medical Society, Dec. 19, 1917.
 Ste. Genevieve County Medical Society, Dec. 22, 1917.
 Benton County Medical Society, Dec. 24, 1917.
 Adair County Medical Society, Dec. 27, 1917.
 Carter-Shannon County Medical Society, Jan. 9, 1918.
 Chariton County Medical Society, Jan. 11, 1918.
 Holt County Medical Society, Jan. 21, 1918.
 St. Clair County Medical Society, Jan. 21, 1918.
 Barton County Medical Society, Jan. 22, 1918.
 Henry County Medical Society, Jan. 24, 1918.
 Moniteau County Medical Society, Jan. 28, 1918.
 Camden County Medical Society, Feb. 1, 1918.
 Scott County Medical Society, Feb. 2, 1918.
 Cedar Country Medical Society, Feb. 8, 1918.
 Clark County Medical Society, Feb. 8, 1918.
 Cooper County Medical Society, Feb. 13, 1918.
 Atchison County Medical Society, Feb. 18, 1918.
 Ralls County Medical Society, March 10, 1918.
 Pulaski County Medical Society, March 11, 1918.
 Pemiscot County Medical Society, March 25, 1918.
 Cape Girardeau County Medical Society, March 28, 1918.
 Vernon County Medical Society, March 28, 1918.
 Putnam County Medical Society, April 11, 1918.
 Cass County Medical Society, April 13, 1918.
 Laclede County Medical Society, April 15, 1918.
 Clay County Medical Society, May 2, 1918.
 Newton County Medical Society, May 2, 1918.
 Jefferson County Medical Society, May 8, 1918.
 Pettis County Medical Society, May 11, 1918.
 Johnson County Medical Society, May 31, 1918.
 Macon County Medical Society, June 24, 1918.
 Gentry County Medical Society, July 11, 1918.
 Daviess County Medical Society, July 15, 1918.
 Laclede County Medical Society, Aug. 9, 1918.

FRANKLIN COUNTY MEDICAL SOCIETY

The Franklin County Medical Society met in regular session at A. L. McNay's office, Pacific, August 6. The following members were present: Drs. Maupin, Briegleb, Booth, Rutherford and McNay. The meeting was called to order by President Maupin.

There were no minutes of the previous meeting held at Sullivan in May, owing to the fact that the acting secretary at that meeting failed to write them up.

The Society approved the amendment to the Constitution of the State Association, Article VIII, Section 3, to strike out the words "who is not in attendance at that annual session." The purpose of the amendment is to authorize the House of Delegates to elect members to office even though such members may not be present at that session.

The Society also approved the resolution concerning the care of practice of members who are in the service of the government.

The question of the County Society paying the annual dues to the State Association of its members who are in the service was discussed. The prevailing opinion was that the County Society should without question remit their dues to such members, and that the State Association should do likewise, thus dividing the burden equally.

The secretary was instructed to correspond with the secretary of the State Association, concerning a letter from Maj. John D. McLean to Dr. W. S. Rutherford. The purport of this letter is to secure proper classification of the physicians in our county and listing them according to availability for service.

Received dues from Dr. H. A. Booth for year 1918.

The Society adjourned to meet in Union the first Tuesday in November, 1918, at 2 p. m.

A. L. McNAY, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The meeting was called to order at 3:30 p. m., August 14, by the president, Dr. S. H. Reynolds. Present: Drs. Reynolds, Sutter, Westrup, Dunnivant, Meisch, Denny, Knabb, Carter, Conway. The minutes of previous meetings were read and approved.

The applications for membership of Drs. Roswell H. Trumppour of Des Peres and G. C. Eggers of Clayton, having been acted on favorably by the board of censors, were presented to the Society and they were duly elected members. The transfer by card of the membership of Dr. Frank L. Whelpley of Kirkwood to the Medical Society of Wayne County, N. C., was reported by the secretary. The applications for membership of Drs. Charles Zuppann and Frank Sandfos of Ballwin, W. J. Ham of Creve Coeur and William P. O'Malley of Clayton were presented and referred to the board of censors.

A general discussion then followed as to the necessity for raising fees, which was participated in by all those present and a resolution was adopted that it was the sense of the meeting that such action was imperative in view of the enormously increased cost of all physicians' necessities and the general increased cost of living. On motion Dr. Eggers was requested to have this action published in the Clayton papers.

ARTHUR CONWAY, M.D., Secretary.

WRIGHT-DOUGLAS COUNTY MEDICAL SOCIETY

The Wright-Douglas County Medical Society met at Ava, on Aug. 1, 1918, with the following members present: Drs. R. A. Ryan, R. M. Rogers, J. L. Gentry, R. M. Norman and J. A. Fuson. The following were visitors: Drs. H. G. James, J. D. Ferguson, J. S. Dickason, and J. H. Coffman, D.D.S., Ava.

Dr. R. M. Rogers delivered to the Society a very interesting and instructive address on "Our Duties as a Profession Relative to the Medical Reserve Corps." The doctor was very forceful in his talk and were it not for the fact that he is above military age all present judged he would already be in the service.

The Society then discussed the subject of "Summer Diarrheas," and some good points were brought out.

Dr. H. G. James presented his petition for membership. Dr. J. D. Ferguson presented transfer from Christian County Medical Society. The ballot was spread and both were duly elected.

There being no further business the Society adjourned.

J. A. Fuson, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

CHLORINE SODA AMPULES.—Composed of a sealed glass tube stated to contain 4.8 Gm. liquid chlorine and a sealed glass tube stated to contain 21.3 Gm. monohydrated sodium carbonate and yielding, when the contents of the tube are dissolved in 1,000 Cc. of water, a solution similar in composition to Neutral Solution of Chlorinated Soda-N. N. R. To prepare the solution the contents of the tube of monohydrated sodium carbonate are placed in a bottle having a capacity of about 2,000 Cc. and dissolved in 1,000 Cc. water. The tube containing the liquid chlorine is suspended from a rubber stopper and is inserted into the bottle and the stopper securely inserted. The large bottle (after covering with a cloth) is shaken to break the chlorine tube, the contents of the bottle are then shaken for two minutes or longer. The solution freed from particles of glass is ready for use, or its available chlorine may previously be checked by titration. The solution so obtained is intended for the Carrel-Dakin treatment of infected wounds. Johnson and Johnson, New Brunswick, N. J. (*Jour. A. M. A.*, July 6, 1918, p. 939).

DEXTRI-MALTOSE No. 2, MEAD'S.—A mixture containing approximately maltose, 53.1 per cent.; dextrin, 42.6 per cent., and moisture, 4.3 per cent. On the claim that maltose is more readily assimilable than other forms of sugar, Mead's dextri-maltose No. 2 is proposed for use in the diet of adult invalids. Mead Johnson & Co., Evansville, Ind.

DEXTRI-MALTOSE No. 3, MEAD'S.—A mixture containing approximately maltose, 52 per cent.; dextrin, 41.7 per cent.; potassium carbonate, anhydrous, 2 per cent., and moisture, 4.3 per cent. In the belief that an addition of potassium salts counteracts a tendency to constipation, it is said to be particularly adapted in the feeding of constipated infants. Mead Johnson & Co., Evansville, Ind. (*Jour. A. M. A.*, July 20, 1918, p. 193).

PROPAGANDA FOR REFORM

CHLORINE SODA AMPULES.—The A. M. A. Chemical Laboratory reports that the Chlorine Soda Ampules of Johnson and Johnson yield a solution containing the claimed amount of available chlorine if precautions are taken to prevent loss of chlorine when the solution is prepared. On the basis of the report, the Council on Pharmacy and Chemistry accepted the Chlorine Soda Ampules for New and Nonofficial Remedies (*Jour. A. M. A.*, July 6, 1918, p. 39).

PROTEAL THERAPY.—Henry Smith Williams, who expounds the use of his "Proteals" for the treatment of cancer, tuberculosis and many other diseases, is better known in the journalistic world than in the field of scientific medicine. A few years ago, Dr. Williams appeared interested in the Autolysin treatment of cancer which at that time was being exploited. The present "Proteal" treatment appears to be a modification of the "Autolysin" treatment. Dr. Williams, in attempting to justify the use of his "Proteals" in tuberculosis, cancer, rheumatism, etc., takes advantage of certain investigations bearing on the nonspecific reactions resulting from the parenteral injection of foreign proteins (*Jour. A. M. A.*, July 6, 1918, p. 58).

OPHTHALMOL (LINDEMANN).—The Council on Pharmacy and Chemistry publishes a report declaring Ophthalmol (Lindemann) inadmissible to New and Nonofficial Remedies. The preparation is advertised for the treatment of eye diseases. It is said to be an oily solution of "glandular extract of the fish *Cobitis fossilis*," but its composition is not definitely declared. The Council rejected Ophthalmol (Lindemann) (1) because the use in eye of an irritant of secret composition and of uncertain activity is unscientific and against the interest of public health; (2) because Ophthalmol is of secret composition, and (3) because no evidence has been submitted to substantiate its superiority over established methods of treatment (*Jour. A. M. A.*, July 6, 1918, p. 59).

THE ITALIAN CONSUMPTION CURE.—Daily papers have purported to give an account of a new alleged cure for pulmonary tuberculosis said to have been "discovered" by Prof. Domenico LoManaco of Rome. The treatment is said to consist of the subcutaneous injection of sugar—the particular form of sugar not being specified. Italian medical journals and medical publications from other European countries appear to contain no reference to this latest "discovery" (*Jour. A. M. A.*, July 13, 1918, p. 142).

SILVOL INADMISSIBLE TO N. N. R.—The Council on Pharmacy and Chemistry reports that Silvol (Parke, Davis & Co.) is a silver protein preparation of the Argyrol type. Its physical properties are similar to those of Argyrol, and, like Argyrol, it is said to contain about 20 per cent. of silver. Like Argyrol, it is non-irritant to the nasal mucosa in 10 per cent. solution. About the same claims are made for the local use of Silvol as are generally made for Argyrol, and these may be accepted. In addition, however, claims are made which are doubtful and which require substantiation. As the manufacturers have presented no evidence for their highly improbable claims, and as they have not signified any intention of making their claims agree with substantiated facts, the Council declared Silvol inadmissible to New and Nonofficial Remedies (*Jour. A. M. A.*, July 13, 1918, p. 140).

DOAN'S KIDNEY PILLS.—A testimonial for Doan's Kidney Pills by Mr. Ford appeared in the *Kankakee Daily Republican*, nearly three months after he was dead and buried. The advertisement containing the testimonial said: "Follow Kankakee people's example, use Doan's Kidney Pills" (*Jour. A. M. A.*, July 13, 1918, p. 140).

PRESCRIPTION A-2851.—Eimer and Amend write that the reported analysis of their "rheumatism remedy," Prescription A-2851, by the Louisiana State Board of Health was incorrect in that it failed to state that 45 per cent. of it was wine of colchicum and in that it contained 9.3 per cent. and not 7.5 per cent. of potassium iodide. On the basis of the manufacturer's statement, each dose of the remedy contains 27 minims of wine of colchicum—almost a full dose. Colchicum is so uncertain that its use in products of the home remedy type should be unhesitatingly condemned (*Jour. A. M. A.*, June 20, 1918, p. 215).

VADEROL.—A rather expensively prepared advertising card, forwarded by a medical officer in France to the Surgeon-General's Office in Washington, read: Urinary Duets—Ancient and Recent Runnings—Cystitis, Prostaticis, Filaments—Speedy and Radical Recovery by means of the Vaderol—Used in the Urological Establishments of the Armies. The card is an interesting evidence of the attempt of a French patent medicine maker to exploit the English speaking soldier now in France (*Jour. A. M. A.*, July 20, 1918, p. 215).

DEPENDABILITY OF TABLETS.—There is no doubt about the convenience of tablets, but the accuracy of the dosage content is not always to be depended on. In

1914, Kebler reported the results of a far-reaching investigation of tablet compounding in which he pointed out that tablets on the market were not as uniform or accurate as was generally believed. During the past year, the Connecticut Agricultural Experiment Station undertook the examination of tablets—proprietary and nonproprietary—taken from the stock of dispensing physicians. The variations found in weights of the tablets were strikingly similar to those reported by Kebler. Allowing a tolerance in composition of 10 per cent., one or more product of the following manufacturers were found deficient: Buffington Pharmaceutical Company; Daggett and Miller Company; Drug Products Company; the Harvey Company; National Drug Company; B. F. Noyes Company; Progressive Chemical Company; Tailby-Nason Company, and John Wyeth & Brother (*Jour. A. M. A.*, July 27, 1918, p. 300).

BOOK REVIEWS

THE TREATMENT OF CAVERNOUS AND PLEXIFORM ANGIOMATA BY THE INJECTION OF BOILING WATER (WYETH METHOD). By Francis Reder, M.D., F.A.C.S., Visiting Surgeon to City Hospital; Consulting Surgeon to St. John's Hospital and Missouri Baptist Sanitarium, St. Louis. Illustrated. Publishers: C. V. Mosby Co., St. Louis, 1918. Price, \$1.50.

This book very properly seeks to popularize a method little used, probably because the necessary details of technic have never been available. This requirement is now met and the method should receive adequate trial. A. E. H.

SYPHILIS AND PUBLIC HEALTH. By Edward B. Vedder, A.M., M.D., Lieutenant-Colonel, M. C., U. S. Army. Published by permission of the Surgeon-General of the U. S. Army. Lea and Febiger, Philadelphia and New York, 1918. Price, \$2.25.

This wonderful little monograph by Colonel Vedder cannot be too highly recommended. In its four chapters and appendix it contains all the statistics and data concerning the prevalence of syphilis, the sources of infection, the methods of transmission, personal prophylaxis, public health measures, notes for the standardization of the Wassermann test, notes on model laws in various sections of this country and foreign countries, and method of control of syphilis in the Army. R. S. W.

THE TREATMENT OF WAR WOUNDS. By W. W. Keen, M.D., LL.D., Emeritus Professor of Surgery, Jefferson Medical College, Philadelphia. Second Edition, reset. 12mo, 276 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$2.00 net.

This résumé of war wounds is intended evidently as a book of general interest for those not directly engaged in the treatment of wounded soldiers. It must serve also as a useful preliminary study for those who expect later to engage in actual work. The book presents in a very clear way the lines of treatment experience has taught those who are actively engaged to be the best. The chapter of chief interest is that dealing with the Carrel-Dakin method. Dr. Keen has been a staunch defender of this method, a fact that has gone far to bolster the faith of many in the profession. The book on the whole furnishes a pleasant evening's reading and to the stay-at-home it has at least a cultural value. A. E. H.

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EDITOR

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COMMITTEE } S. P. CHILD, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE PASSING OF THE CURET OR THE CONSERVATIVE TREATMENT OF ABORTION *

GEORGE CLARK MOSHER, M.D.
KANSAS CITY, MO.

Observation over a period of years in the wards of the Kansas City General Hospital has convinced the author that the routine treatment of abortion by the curet was followed by untoward morbidity and unnecessary mortality. Three years ago the technic of a conservative method of handling these cases was adopted by the attending staff after careful consideration of the records of the preceding five years where curettage had been the unvarying procedure.

The results of the new method have been so universally satisfactory, and in some cases so astonishing, that it is felt the duty of the staff to lay the facts before the profession.

It is to be borne in mind that none of the minor surgical gynecological procedures is so spectacular as a currettement. Nothing would seem prima facie as logical as the emptying from the uterus of a mass of decomposing foreign material, which was causing chills, temperature and hemorrhage. Hence every gynecologist and many men in general practice made it the regular plan of treatment to use a curet, sharp or dull, in all abortions which came under their observation.

Winter, in 1911, found in a series of 100 cases of septic abortion 13 deaths from infection, 4 cases of pyemia not fatal, 18 cases of parametritis and 10 cases of endometritis. He found in searching the literature of clinical centers that the results recorded were equally deplorable. Schottermuller reported a mortality of 10 per cent., and Stock 23 per cent. Winter claimed that the high death rate was

due to the type of infection. For instance, among 20 cases of streptococcic infection of hemolytic types, there were 10 severe cases of sepsis and 6 death. In a series of 10 cases due to *B. coli communis*, but one case was severely ill and no death occurred. In 24 cases of staphylococcus infection he found two severely ill and one death. Winter condemned the prevailing radical method of treatment and advised the expectant plan.

In Bumm's clinic, on the other hand, as in many others, it was urged that the uterus be emptied promptly because the hemolytic streptococcus would overwhelm the resistance of the body by a deluge of virulent bacteria, and the patient would perish, since being paralyzed by the infection she could offer no barrier to the assault.

It is curious to note the belief of Vineberg that in spontaneous abortion or miscarriage there is no fever unless retroversion or retroflexion dam up the lochia.

Winter's theory is that the infection is an entity of its own, not particularly affected by the fact that the uterus contains any part of the product of conception. According to his theory hemorrhage in abortion may be a menace to the patient, but if so, it is because of the resulting anemia which reduces the resistance of the patient, and must therefore be considered apart from the abortion itself.

Vineberg and Wience conclude that a bacteriological examination of the uterine contents furnishes no criterion of the prognosis, nor of the indications for treatment. Even in Germany, which has been the stronghold of bacteriology, little stress is placed on the value of bacteriologic findings in septic abortion.

Schottermuller, who is perhaps the greatest authority on the subject, discards the usual differentiation between sapremic and septic cases, and says that every form of bacteria may be found in the blood, and even the *B. coli communis* may cause a profound infection, occasionally ending in death. However, he demands

* Read at the Sixty-First Annual Meeting, Missouri State Medical Association, Jefferson City, May 7, 1918.

the immediate emptying of the uterus if there is sign of fever.

DeLee (Yearbook 1918), commenting on Vineberg's argument, says: "One may safely wait, of course, in the absence of hemorrhage, for days and weeks for the expulsion of secundines by Nature. The high temperature will subside and the general health improve. After a week or 10 days of normal temperature one may empty the uterus if it has not done so itself in the meantime."

Dr. John O. Polak of Brooklyn (*American Journal of Obstetrics*, March, 1917) discriminates between cases which are in the hospital as clean therapeutic abortions, and the incomplete inevitable septic cases, brought in from the outside, usually following criminal attempts, in which it is impossible to know how much or what sort of manipulation has been suffered by treatment before the patient comes under observation.

Several years ago the American Gynecological Society sent out a questionnaire to its members on the subject of the treatment of abortion. In the answers, the great variety of opinion expressed led at once to the conclusion that the subject was at any rate subjudice. There was no well-grounded standardized system of handling these cases. To illustrate that the dangers of the curet are not merely those incidental to the use of a plan of treatment which in itself does not yield satisfactory results, an apology is offered for the introduction of the following statements of facts. They have a bearing on those cases where curettage is done either hastily, or without long observation of other operators who may have developed a conservative technical skill, thus aiding in their avoidance of injury.

A former chairman of the obstetric section of the Jackson County Medical Society related to the writer a fact which came under his observation in one hospital during one winter: in the heyday of the glory of the curet, rupture of the uterus was diagnosed in four instances, during curettage, by the instrument slipping through into the abdominal cavity; laparotomy being done and each of the four women having recovered. With such a revelation in the operating room of a well organized hospital and in the hands of a skilled surgeon, what must be the record in the thousands of cases where curettement has been done in the home, under environment not surgical, with poor light and often with no assistant.

The writer was recently called to a charity case in which a young practitioner had yielded after importunity on the part of the family that the womb must be "cleaned out," and found that following three hours' effort to empty the uterus of an incomplete abortion, in a five paragraph 24, the doctor had desisted, feeling he had,

as he expressed it, "torn out a piece of the uterus." Learning that the patient had a pulse of 80 and a normal temperature, the doctor was assured that his fears were not well grounded. However, considering such a performance, done in a cottage, by the light of a coal oil lamp, the only assistant being the mother of the patient, one shudders at the risk of leaving four orphan children, where a conservative treatment of the case would at least have reduced to the minimum the dangers of sepsis. Fortunately the patient recovered.

These stories are not related in a spirit of hyper-criticism, but to impress on all of us that the gynecologist by having set forth the virtues of the curet, established a technic which has degenerated into a mass of poor surgery, and it is now the duty of our teachers to set the profession straight.

No doubt there are many instances where no such untoward events have occurred. Cases which the curet has relieved *cito tuto et jucunde*, but in view of the experience of the staff of the General Hospital, after a period of four years, it is to be hoped that cases of abortion coming into the hands of our *confrères* will be given the benefit of careful conservative treatment before radical interference. This method has now passed beyond the stage of experiment.

We undertook to differentiate between those which were infected by streptococci or staphylococci, and those due to less virulent bacterial invasion. After some months, it was decided that the conservative plan is in effect the proper one to adopt in all cases where a temperature of 100, arbitrarily selected as a starting point, indicated some degree of infection and absorption.

Under the direction of my junior attending, Dr. Buford G. Hamilton, the intern on duty makes the culture, but we no longer discriminate in technic.

In order to show by contrast the results of the conservative treatment as compared with the former radical method: One hundred cases were taken from the records between 1910 and 1913, at which time every surgeon in the hospital promptly curetted all cases which came into his service. The intern who copied the histories recorded the number of days in the hospital, the period of gestation, alleged cause of abortion, amount of hemorrhage, temperature and complications, and these were used as a check against which 350 cases treated expectantly were pitted.

We have based on these 350 cases our Kansas City General Hospital method of conservative treatment of abortion, which seems to us to be conclusive. We have in the last four years treated all cases alike, by the expectant plan, and our results are given below.

In the 100 cases in which the curet was em-

ployed to empty the uterus—1910 to 1914—we find the average number of days in the hospital 22.5, and in the new expectant series 8.3 days, which, considered as a matter of civic economy alone, is a reduction of two weeks expense to the city, leaving out all consideration of the welfare of the patient. When it is realized that the overhead expenses, per capita, in the hospital are \$3.40 per day, and we average ten abortion patients, this alone should cause a reformation from the point of view of the taxpayer.

The number of complications of the peritoneal adnexa are, in the curet series, 72 per cent., and in the conservative series 5 per cent. The mortality has been reduced to nil. The only deaths in the past two years in our ward for abortion cases were of two women who had been curetted before entering the hospital.

A plan of treatment which is so radical a change and more especially one which substitutes the doing nothing, for a heroic operation, naturally excites antagonism, and friends of the patient frequently demand that she be not neglected, that the womb must be cleaned out. However, the results of Fowler's position, a dose of magnesium sulphite, the ice bag over the abdomen, and an occasional hypodermic of morphin $\frac{1}{8}$, has been so gratifying, that with reference to abortion, the passing of the curet is, with us, only recognized as an instrument of historical interest, and not as a therapeutic measure.

Cases are given a small dose of pituitrin, if a stimulant is required, and if hemorrhage is encountered of sufficient quantity to justify, the cervix is packed, with every precaution as to surgical asepsis, and as a rule when the packing is removed, the mass comes away with it.

It goes without saying that every case is considered a threatened abortion, and treated by rest in bed, ice bag, morphin sulphate until symptoms carry it into the class of incomplete abortion.

In the first place, even in the hands of the expert gynecologist, it must be admitted that curettage will not empty the uterus in the majority of cases. After a positive assurance that the curettement is complete and the mass entirely expelled, we are frequently embarrassed by having a series of pains set up in from twenty-four to seventy-two hours, and the subsequent discharge of remains of fetus and secundines show that the opinion was not well founded.

When it is considered that through the freshly opened sinuses of the uterine mucosa, we prepare a way by which may be absorbed into the lymphatics and the blood stream infective materials, it is safer to let sleeping dogs lie, and not disturb the efforts Nature has made to throw around the war zone a barrage of leuko-

cytes to gas the attacking patrol of cocci which menace the life of the victim.

Since the systematic adoption of the Wassermann reaction, in the study of abortions, it has been shown that lues plays a very small part in the production of abortion in the early months of pregnancy, although it holds unenviable record in the responsibility for premature labor and still-births.

Interesting experiments have been made recently to show the part played by the *B. abortus* of Bang, who in 1905 demonstrated that contagious abortion in cows is due to a specific bacillus, and it is suggested that many otherwise unexplainable abortions in the human female are to be attributed to this cause. However much we may attempt to account for the premature expulsion of the embryo by means other than artificial the melancholy fact remains that the majority of these abortion are artificial and when the confession is forthcoming we find over 90 per cent. of them criminal.

Knowing how frail is the witness under examination or how forgetful of the causes leading up to the escape of the products of conception, we are justified in treating all these cases with suspicion, and our experience has justified us in this position. Those which do not on admission show signs of infection and absorption may do so within a short period and thus we are playing safe.

Bryant Building.

DISCUSSION

DR. W. C. GAYLOR, St. Louis: Ever since the classical report of Winter in 1914, there has been unanimity of opinion on the subject of the curet in the treatment of retained placental particles. This does not mean that the curet has been entirely discarded, it merely means that in the literature very few voices have been raised in its defense.

Previous to 1840 few local measures were employed, unless the ovum was in the vagina, in which case it was removed with the fingers. Cold water was injected into the rectum and into the vagina. One very bold man suggested that the finger be forced into the uterus to touch the placenta, after which it was withdrawn. In the forties Dr. Bond of Philadelphia introduced his placenta forceps, and DeWees used a small dull hook, but most physicians employed the finger or nothing up to 1886.

In 1873 it was considered heroic and very energetic treatment to pack the vagina with gauze or a sponge.

Early in the eighties the finger and dull curet were used, and by 1888 the sharp curet had gained wide popularity. This popularity seemed to increase instead of diminishing up to March, 1914, although there were always some careful men who used the curet rarely and with caution. One man of national reputation said in 1913 that every woman who had aborted at ninety days or less must be curetted even though the ovum came away intact.

These times have fortunately passed. It is probably an exaggeration to say that the curet is the instrument of the abortionist alone, still the obstetrician has very little use for it.

DR. FRANK HINCHEY, St. Louis: I would like especially to speak of the first paper. I think a paper like this might well be read to every medical society in the country. The author has presented one hundred

abortion cases treated with curettage and three hundred without curettage. The fact that he has had no—or very few—postoperative lesions in the cases that have been “let alone,” speaks more than any words can say of the adequacy of such treatment. But a very essential factor in such a line of treatment must include the education of the public or we cannot control our cases. We have been educating the public along the lines of operative treatment for appendicitis and with splendid results. Now, with abortion cases the public has fixed and positive ideas as to what should be done. They want to know, bluntly, “when are you going to do the cleaning?” They expect that; for all of their friends have had it done under like circumstances. Of course your patient will get away from you if you do not explain why your treatment is correct. The only thing is to educate the people. I tell them that there may be some little remnants which nature will take care of. I say to the woman, “I will send you home and if everything is not progressing properly, we will bring you back and operate when all the danger has passed.” But the trouble is that if anything develops forty years from now, they will say that the woman was not cleaned out as she should have been. Therefore, without some education you cannot turn the patient loose.

DR. J. F. CHANDLER, Oregon: The first paper is interesting to me as a country practitioner. While that has been the treatment I have followed in my practice I do not use curettage for the simple reason that I know my ability. In these cases I have followed this rule, that if I did not know a thing I did not undertake to do it. There is a saying that “Fools rush in where angels fear to tread.” I have been using conservative treatment and I have never lost a case in miscarriage. I do not attribute that to ability, but to absolute cleanliness and perhaps luck. But notwithstanding this I have seen patients die treated with curettage. Some people say there would be no advancement made if you hesitate to advance, but I know my position and I know what I can do and when I cannot take care of the case I call in a man who has had experience in these cases in hospitals where he has done these operations. Some say the country practitioner does not get anywhere. That may be, but the fact that surgeons are now adopting the more conservative method, and seldom using the curet, proves to me that the country doctor has lost little by his failure to curet in case of abortion.

DR. GEORGE C. MOSHER, Kansas City: I certainly appreciate what the gentlemen have been kind enough to say about my papers. I have been very much interested in both of these subjects and I have been trying to do something in an educational way, because it is only by having a large number of cases that you can draw conclusions. The man who is able to do research work helps solve the problem in some degree, so these results which I have carefully compiled from our records do have some basis of authority.

I should like to say that compared with the average program of the State Association for a number of years I want to congratulate the Society on going back to the standpoint of the general practitioner. If you glance over this program you will see the number of papers which are of direct interest to the general practitioner not such a purely surgical program as we have been used to having. Of course, we all enjoy surgery, but those things that the average man comes in contact with every day are the things that should be handled before this Association. It is gratifying to see that the obstetrician is getting away from being classed with the midwives, and really is considered as a scientific member of a scientific profession.

STERILITY DUE TO RETRODISPLACEMENT OF UTERUS: NONOPERATIVE AND OPERATIVE TREATMENT *

E. LEE DORSETT, M.D.

ST. LOUIS

The displaced uterus has received considerably more blame for conditions in the female than is justifiable. The more we see of gynecological cases, the fewer are the disturbances that are directly referable to the malposition of the uterus. These conditions are, in a large majority of cases, coincident with other lesions in the pelvis.

How often we see those cases which are taken to be simple retroversion or retroflexion which produce the so-called classical symptoms, namely, dysmenorrhea, backache and headache, etc., when on opening the abdomen we find prolapsed ovaries, which are either adherent or cirrhotic, or some old inflammatory tubal trouble that had escaped our notice when the case was first examined. On the other hand, retrodisplacements with pathological conditions of tubes or ovaries, or both, may have existed for years and yet never have produced any noticeable symptoms. Dr. Baldy of New York very well summed this up when he said, “The treatment of retrodisplacements is a misnomer; it should be, the treatment of the conditions in connection with which retrodisplacements of the uterus occur as an incident.”

To illustrate this point, I cannot help but mention a case I operated on three weeks ago. A woman, 32 years old, was referred to me with a preliminary diagnosis of retroversion and left cystic ovary. She had been married two and one-half years, but had never been pregnant. Her family history was negative, and she had never had to her knowledge any pelvic inflammatory trouble. She complained of pain in the left ovarian region, which was worse at her menstrual periods, and also severe backaches and headaches. On examination I found a cervix that pointed upward, the os very small and there was a stenosis of the cervical canal. The fundus was backward and the left ovary was palpable and very painful. The right side was negative and there were no indications of any old or recent inflammatory conditions present. A laparotomy was advised, and on opening the abdomen it was found that both ovaries and tubes were plastered to their respective broad ligaments. The left tube showed marked old inflammatory changes and the ovary on this side had undergone a cystic degeneration. The right tube and ovary were also prolapsed and adherent to the broad ligament, but the attach-

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ments were much less dense and easily freed. The ovary was about normal, but the ampulla of the tube was closed. The uterus was backward. The appendix was practically obliterated from an old chronic inflammatory process. The operation consisted of a removal of the left tube and ovary; the freeing of the adhesions about the right tube and ovary and the opening of the occluded end of the tube and suturing its mucosa and peritoneal coats together, so that an artificial fimbriated extremity existed. The uterus was brought forward and held by the classical Gilliam operation.

In reporting this case I lay myself open to criticism in regard to my treatment of the right adnexa, but will say that I considered this a case where conservative surgery was certainly indicated as there was no active inflammatory process present, and certainly this would give the woman some chance of a future pregnancy, where, if I had removed both tubes, there would not have been any. Of course the question comes up as to whether or not adhesions will not form over the artificial opening; this is always a possibility.

There is, however, a condition caused by a displaced uterus which I wish to emphasize, and that is sterility. Do not misunderstand me when I make this assertion, as I do not mean to state that this is the sole cause of sterility by any means. This condition in the female is most varied and complex, and the cause in some cases, entirely obscure. The cases here presented are those in which a retroversion or retroflexion, together in one or two cases with a stenosis of the cervix, was found to be the sole cause of the failure of the woman to become pregnant.

In all of my cases the numerous etiological factors that produce sterility in the individual case under observation were eliminated, and it was only after a very careful study of the woman, as well as her husband, and repeated examinations and the numerous nonoperative procedures tried out, that the patient was subjected to an operation. In several of these cases the nonoperative measures (pessaries and cervical dilatations) were used in conjunction with the operative means of correcting the displacement of the uterus. In none of these cases were the women operated on simply because they were sterile, or that there was a retrodisplaced uterus present. It was only in those cases where I felt sure that the displacement of the uterus was giving trouble by traction on the broad ligaments, and producing pelvic congestion and causing ovarian disturbances, that I felt myself justified in doing a laparotomy, and then only when I had a thorough understanding with the patient and her husband, just why I was operating and that a future preg-

nancy was a probability, but not an assured event.

All of these cases here presented are cases of primary sterility, that is, women who have been married over two years, had never used any means to prevent conception, and had never been pregnant. I have a number of cases of unmarried women whom I have operated on for retroversion accompanied by associated conditions, who after marriage, have become pregnant, and also a number of cases of married women, who have had one child and who were desirous of having another, but were prevented from becoming pregnant by a displaced uterus, together with lacerations of the perineum and cervix, and on whom I have done either the Gilliam or Webster-Baldy operation, and repaired the lacerations, and these women later become pregnant. I am sure that in the last two types of cases they would never have borne children had they not undergone an operation.

In taking up the subject of backward displacements of the uterus, I cannot help but mention two important causes of this condition that are often overlooked—namely, traumatism and the habit that young girls have of allowing the bladder to become overdistended, and thus pushing back the uterus. I have in mind a number of cases that have come under my observation where I am sure that their retroversion was due solely to severe falls that they had received. Of course we must not lose sight of the fact that we occasionally see cases of so-called "infantile uteri," which are due to certain anatomical changes or arrest of development in the organs of the woman. In this latter type of cases, operative procedures generally meet with poor success, so far as the patient ever becoming pregnant is concerned.

Before taking up the treatment of this subject I wish to emphasize the fact that there is one fundamental principle that cannot be ignored, and that is whether or not there is active spermatozoa in the semen of the husband. I have seen several cases who have undergone all manner of surgical gymnastics, and when the semen was examined, not one motile spermatozoon was found.

There is still another condition that must not be overlooked in the female, and that is the nature of the chemical reaction of the vaginal secretions. Unless this condition is corrected, all other methods will fail as far as placing the woman in a position so that she will become pregnant.

There is one point I would like to call attention to in regard to the mechanical cause of sterility, and that is the added displacement of the external os, brought about by the back-

ward displacement of the uterus. When the uterus is retrodisplaced the external os does not lie in the seminal pool that is deposited in the posterior fornix during intercourse. The cervix is generally displaced and pushed up against the anterior vaginal wall. Funk-Bretano has pointed out that where retroflexion is of congenital origin, the cause of sterility is then due to the nondevelopment of the fornices, causing a shallow vagina which does not retain the semen when deposited there.

I will not burden my hearers with the technic of the varieties of methods that are in use in the treatment of this condition, as we are all familiar with most of the methods in vogue at the present day. In my own work along the nonoperative line, I will say that I make use of the Hank's graduated dilators for the stenosis and atresia of the os and cervix, and the properly fitting Hodge pessary for the correction of the displacement when it is applicable. I wish to say though that when one makes use of these instruments they should only be applied under the most aseptic conditions, as I have seen several cases where I am sure their use produced a most serious pelvic infection, and where the unfortunate women were obliged to undergo an operation.

Personally I am opposed to a curettement in cases of sterility, as I do not think the operation is indicated. In a certain percentage of cases I am sure that it does harm, in that it produces a certain amount of traumatism on the endometrium, and a more or less disturbance of the deeper uterine tissues which may never be replaced, or if so, by cicatrices which will cause a stenosis and leave the woman far less liable to become pregnant than before. The so-called "simple curettement" is much more of an operation than most of us think, and is one that is done, as a rule, with the poorest technic. This operation in our general hospitals is usually turned over to our junior interns to perform, without even the first principles of the procedure being demonstrated to them. They are considered minor operations and therefore lightly looked on.

In the correction of uterine displacements by means of various round ligament operations, or those operations on the pelvic floor, there is oftentimes one important fact which is overlooked, and that is what will be the results of the operation on subsequent deliveries? (I have had the unpleasant experience of trying to deliver a woman on whom had been performed the old ventro-fixation operation.) In performing these operations for displacements, we not only want a symptomatic cure, but we want to place the uterus in as natural a position as possible and to keep in mind the fact of the patient becoming

pregnant and going through a labor devoid of dystocia. A. E. Gilles of England has called attention to the tendency of certain cases on whom a hysteropexy (as he calls the operation) has been done, to miscarry. He reports forty-eight cases of women on whom this operation has been done who have become pregnant, and five of these had aborted. Personally, I have had two cases miscarry, but am unable to say that this occurred because of the operation.

In regard to the operative measures will say that I use the Dudley operation for the cervical stenosis and atresia of the os uteri, and for the retrodisplacement, the modified Gilliam operation. This operation has been most successful in my hands and I have been fortunate enough to have assisted at and done nearly two hundred of the Gilliam operations, and have yet to see a case where there has been any intestinal obstruction, and so far have only seen three cases reported in the literature. I have delivered a number of women on whom this operation has been done and have seen no dystocias, unless I might count a case reported in this paper. I have seen three cases where the operation might be considered a complete failure, but these cases were operated on some six or eight years ago, and I am sure they were due to imperfect technic.

There are several points in the technic of the Gilliam operation that I hope you will pardon me if I call attention to and they are the mistake of not properly implanting the round ligaments into the rectus muscles or their aponeuroses, and also that the implantation is made entirely too far above the symphysis pubis.

Another step which I consider most important and which should never be omitted is that the round ligaments should so be fastened and drawn through the muscles and fascia that the distal unused segment of the ligament and its uterine origin should both be in contact with the parietal peritoneum.

There is another feature of these cases that is neglected, if I may go so far as to say, of the great majority of operative cases that leave the hands of the surgeons, and that is, a careful examination of the patient before she leaves the hospital, and if possible, another examination a month or six weeks after she is discharged from the hospital. It is amazing to me, the number of surgeons who never seem to take the interest to examine their postoperative cases again. We should not only reexamine our cases, for the patient's own good, but for the valuable information that we obtain from these examinations for ourselves. We often lose the really best results of our operative work by not seeing our cases again, as there are often many little things that may be corrected, and advice

given to the patient which will be the means of greatly improving our operative results and the patient's usefulness to herself and society in general. This is especially important in the type of cases taken up in this paper where, unless the cervical stenosis is watched, and several more dilatations done at the office, the condition is apt recur.

The following cases I hope may tend to illustrate a number of points taken up in the above paper.

Of the ten cases here reported, one became pregnant when only a well-fitting pessary was use, two with a pessary and repeated cervical dilatations, one with a Dudley operation on the cervix, two with a Gilliam operation, one with an internal Alexander operation, two with a Gilliam operation and dilatations after operation, and one with a combined Gilliam and Dudley operation. Two of the cases required cesarean section, one on whom the internal Alexander had been done by another surgeon, the other case on whom a Gilliam had been done, but in which pelvic measurements had been neglected, and who had a flat pelvis. All cases recovered from the operations, and all went through a normal puerperium. None of the children were lost during delivery. One baby died four months after birth from an intestinal derangement.

CASE 1.—Mrs. E. A. M., aged 30, married four years and no pregnancies. Uterus showed a second degree retroversion but was mobile; cervix pointing forward and upward. Had dysmenorrhea with usual symptoms. Hodge pessary inserted. Was kept under observation and found to be pregnant. Patient now three months pregnant.

CASE 2.—Mrs. E. J. W., aged 23; married two and a half years; no pregnancies. First seen May 23, 1914. Had an obstructive dysmenorrhea due to cervical stenosis and atresia of os, together with a marked retroversion. Uterus replaced and held with pessary. Cervix dilated with Hanks dilators at office. Received eleven treatments and was then found to be pregnant. Was delivered Oct. 10, 1915.

CASE 3.—Mrs. W. E., aged 30; married three years but never pregnant. Had a first degree retroflexion with marked elongation of cervix with stenosis. Dudley operation on cervix and later uterus was replaced and held with pessary. Patient delivered eleven months later. No dystocia.

CASE 4.—Mrs. E. B. R., aged 29; married three and a half years but never pregnant. Severe dysmenorrhea. Retroverted uterus with stenosis of cervix. Chronic recurrent appendicitis. Right cystic ovary. Operated on. Dilatation of cervix, appendectomy, removal of cystic right ovary. Dilatation of cervix continued after case left hospital with the insertion of a well fitting Hodge pessary. Patient menstruated three times after leaving hospital and was then found to be pregnant. Return to her home at Sikeston and was delivered by her family physician.

CASE 5.—Mrs. A. L. R., aged 26; married three years, never pregnant; received a severe fall three years before marriage and since that time always suffered from dysmenorrhea. Had a marked retroflexion with stenosis of cervix and atresia of os uteri. Laparotomy performed. Tubes and ovaries found to

be lightly adherent to their respective broad ligaments. All adhesions were freed and uterus was brought up and held with a Gilliam operation. Became pregnant thirteen months after operation and was delivered by a low forceps operation.

CASE 6.—Mrs. E. W., aged 24; married three years with no pregnancies. Had severe dysmenorrhea since her menstruation. Was operated on in February, 1916, by another surgeon for her retroversion, and the uterus held up by an internal Alexander operation. Patient made an uneventful recovery, and one year later became pregnant. In January, 1918, was referred to me and found to be at or near full-term pregnancy. Eleven days after entering hospital went into labor. Her labor pains were regular and exceedingly hard, but the head of the child failed to engage. The cervix reached a three-quarters dilatation and the membranes ruptured. The case was in labor thirty-two hours but the head made no progress. At no time was a vaginal examination made, all examinations being made per rectum. No pituitrin was given. Because of the beginning exhaustion of the woman and the dystocia, a cesarean section was performed and the patient delivered of a living child. The abdomen was opened by the Davis incision (above the umbilicus) and 1 c.c. of pituitrin injected directly into the uterus. The uterus incised near the fundus and the child extracted by the feet; the placenta was on the posterior wall and was easily removed. Uterus and abdomen closed in layers. It was interesting to note that the uterus was held forward and that there were numerous adhesions between the uterus, omentum, abdominal wall and adnexa. The evident cause of the dystocia was probably due to a marked antelexion of the uterus preventing the proper engagement of the child's head. The mother and child made an uneventful recovery.

CASE 7.—Mrs. P. M., aged 24; married five years; no pregnancies. First seen in December, 1914, with history of dysmenorrhea, menorrhagia and occasional metrorrhagia. On examination the uterus was found to be retroflexed. Operated on May, 1915, Gilliam operation and partial resection of both ovaries. Uneventful recovery. Became pregnant ten months later and was delivered by a low forceps operation in due time. Unfortunately the child died four months later with a "summer dysentery."

CASE 8.—Mrs. J. N. T., aged 25; married two and a half years; never pregnant. History of marked dysmenorrhea, leukorrhea, and pain in back and lower abdomen at all times. Persistent headaches and irregular spells of gastric disturbances. Uterus was found to be retroverted and a cervical stenosis was also present. A diagnosis was also made of chronic appendicitis and cystic right ovary. Operated on in 1914, Gilliam operation, appendectomy, partial resection of right ovary and dilatation of the cervix. The patient made an uneventful recovery. The cervical dilatations were continued for one month after case left hospital. Patient became pregnant in May, 1917, and was delivered in due time of a living baby by a mid-forceps.

CASE 9.—Mrs. C. A., aged 24; married four years with no pregnancies. History of premenstrual dysmenorrhea. Uterus retroverted with atresia of cervix and stenosis of os. Uterus was replaced with pessary and repeated dilatations of cervix failed to get results as far as a pregnancy was concerned. Patient consented to an operation and was operated on February, 1917, at which time a Gilliam operation was performed. Patient became pregnant three months later and went to full term and was in labor thirty-six hours without progress of the fetal head. On a careful pelvic measurement it was found that the woman had a flat pelvis with the measurements

below normal. (Unfortunately this had been overlooked before operation or the case would have had labor induced before full term.) As the pelvis was small and the child unusually large, it was decided that a cesarean was the best method of procedure and this was done, and the mother and child made an uneventful recovery.

This is the only case in my experience in which a Gilliam operation was done where there was a dystocia, and I cannot see that it was the sole cause of the trouble. The mistake was made in not making careful enough pelvic measurements and allowing the woman to go to full term without inducing labor. The woman was under the care of another physician during her pregnancy and pelvimetry had been neglected.

CASE 10.—Mrs. W. F. T., aged 34; married six years but never pregnant. History of severe dysmenorrhea with irregular menstruation. Examination revealed a retroverted uterus, conical cervix with stenosis and hypertrophied ovaries which were extremely painful on palpation. Patient was operated on; the cervix was partially resected and the modified Dudley operation done. The abdomen was opened and the uterus brought up and fastened by a Gilliam; both ovaries markedly cystic and were partially resected. The woman became pregnant ten months after her operation and was delivered of a living child.

CONCLUSIONS

1. All cases of sterility should have a careful examination and not until the exact cause of the trouble is ascertained should any method be used. In some cases it is necessary to use two or more procedures before results can hope to be obtained.

2. The nonoperative methods should be tried first before the patient is submitted to an operation.

3. Nonsymptomatic retrodisplacement, whether the cause of sterility or not, is not an indication for operation.

4. All cases should receive careful and repeated examinations after leaving the hospital after operation.

5. A curettement has no place in the operations for sterility.

Wall Building.

DISCUSSION

DR. GEORGE C. MOSHER, *Kansas City*: I think we can all feel that the mantle of Dr. Dorsett's distinguished father has fallen on worthy shoulders, when a paper such as his is presented before this society. I want to commend the doctor's very sane system of argument, and first taking up the nonoperative treatment for sterility I want to commend what he says condemning indiscriminate curettement. Regarding the question of sterility it is certain to be one of the commonest causes of connubial infelicity, and I would particularly recommend the doctor's follow-up system. I think most of us are apt to overlook the necessity of following up the results of sterility and we lose sight of many case which might be corrected.

DR. C. LESTER HALL, *Kansas City*: Dr. Mosher stole my thunder in regard to Dr. Dorsett's paper.

I am satisfied that many of these cases of sterility are due to displacement of the uterus, not only retroflexion, but anteflexion, which is frequently congenital. I have seen a number of married, young women suffer-

ing with intense dysmenorrhea in which the only remedy is to dilate the cervix. I have seen married women who were sterile because of anteflexion and retroflexion. Retroflexion does not always interfere with conception; the trouble is not that they do not conceive but that they miscarry. It is a common thing to see women with a retroflexed uterus conceive and miscarry time and again, and in these cases something should be done, and a well adjusted pessary, after the uterus has been placed in position, is one of the most important procedures I can imagine. The fact is, I believe, we have neglected the pessary in the past. I believe in the use of the pessary if it is properly adjusted, but it is entirely irrational to talk about putting a pessary in without first putting the uterus in position. The trouble is, that we have neglected a thorough examination of the patient and we simply mechanically and automatically put a pessary into the vagina when we have a uterus retroflexed. We should put the patient in the knee-chest position; and put a repositor in the uterus and place the fundus exactly where it should go, and then when we have the fundus just where it should be, we introduce a pessary as best we can and in my experience I have learned that it is possible to make a perfect fit. We hold the pessary in position until the woman gets off the table and assumes the erect position and then we have the patient walk around and see if it holds up the uterus, and if it gives no discomfort we discharge the patient with the understanding that she comes back for an occasional examination and replacement of the pessary.

The doctor has mentioned some very good operations for replacement of the uterus, but he has failed, in my mind, to mention the most valuable of all the operations ever suggested, viz.: the Montgomery operation. I may perhaps be biased because I have done the operation so often with perfect success that I feel it should be mentioned here and in all other places where men discuss this subject. It is very much like the Gilliam and other operations, only in this, that the round ligament is drawn up under the peritoneum instead of directly through it; it goes under the peritoneum and there is nothing for it to be entangled with in the pelvic cavity; it is drawn up and fastened to and over the fascia above. In that way you are using for the support of the uterus the strongest part of the round ligament, that is the round ligament next to the uterus. Whereas in the other operations many of them use a part that is narrow and small for the support of the uterus. Then there is only one opening above the uterus, whereas in the other operations there are three spaces where bowel entanglements may occur. An operation of any kind that does not imitate nature is a mistake. This operation leaves the uterus just as nature intended it should be.

DR. FRANK HINCHEY, *St. Louis*: I am glad to have heard Dr. Dorsett's paper, because I have rather come to the conclusion that all operative procedures for the treatment of sterility, at least in my hands, were unsuccessful and in many cases in which I hoped to correct the disability, I was not successful. Of course, no matter what we do, even to the placing of a tampon, the patient may become pregnant and so may believe we have cured her of sterility, while we know we have done nothing. Indeed, I will be most interested in studying his case reports. However, I wish to say this in regard to the correcting of retrodisplacement with operative measures as a treatment for sterility: that I do not believe we have a physiological basis to justify them. I have rather come to the conclusion that sterility is due to an inherent ovarian defect. If we could show what percentage of young women having retroflexed uteri that have become pregnant without correction

of the deviation we would have a better basis for our argument. I do not know what percentage of these women become pregnant. Of course we have no way to determine, but I have no doubt that a great many young women with retroposed uteri become pregnant. We also know such patients commonly have no symptoms, hence are never treated or examined. I feel, however, that a retroflexed uterus is not in any way physiologically wrong. It often does not produce any positive symptoms and, until we can show that the endometrium of the misplaced uterus is not capable of being properly sensitized for the reception of the fertilized ovum, I do not believe we have a physiological basis for operation. I believe, as I said, that ovarian deficiency is the usual cause of sterility. I would rather treat such cases with the various extracts derived from the ovary.

I want to commend very highly the doctor's discussion on the use of the curet. I do not very often use the curet unless there are good indications. Previously, we too often curetted, thinking it could do no harm, which I believe now is a bad procedure. I think if we have positive reasons, we ought to do it, but if not we should not risk doing harm.

DR. T. F. LOCKWOOD, Butler: This is a paper that should appeal very strongly to the country physician, for we as country practitioners, if we cure our patients at all—and we do cure many of them of uterine displacements—must do it without surgical interference. I quite agree with the essayist in regard to one of the frequent causes of uterine displacement—an overdistended bladder—but I do not think much of the traumatic cause, a fall or a jar as causing a protracted displacement of the uterus. A displacement of the womb comes on from a prolonged strain or pulling on the ligaments of the uterus, and if a jar should displace the organ it would only be for the time being and it would soon correct itself. But one frequent cause of uterine displacement is due to muscular weakness or general debility of the individual, a lack of muscular tonicity, and this general physical weakness is one of the causes of sterility in many young women. The thing that causes displacement of the uterus may also be the prevailing cause of sterility. Many of these unfortunate subjects need building up as their general system is at fault.

In regard to curettement I do not think much of it. Every time I pick up a sharp curet I feel like pounding it into a pruning knife or throwing it into the scrap heap, so dangerous is this instrument in the hands of anyone. The blunt curet is all right when wisely used, but you have to be very careful in curetting a uterus that you do not cause permanent sterility, the very thing you are trying to relieve by destroying the mucous villi of the uterus. I think a great deal of the old-time treatment with the medicated cotton tampon, but first of all I diligently use the massage treatment of the uterus. You cannot effect a cure in a short time; it takes many treatments at close intervals to accomplish the desired results with uterine massage, but by keeping up the treatment persistently for some time before attempting to apply the tampon, you get new blood into the organs by mechanically exercising the ligaments that hold the uterus in place. When you get the ligaments softened and have restored their vitality, then place the organ in its natural position and hold it there with your cotton tampons saturated with iodine water. I do not use the pessary because I have never gotten any good results from it, but I think a great deal of the tampon treatment fully carried out. You should use them large, completely filling the vaginal cavity, crowding them so tightly that they will hold the uterus in place and in that way you give the supporting ligaments a chance to recuperate and re-

store themselves and after a while hold the womb in its natural position until its physiologic function becomes established.

DR. N. I. STEBBINS, Clinton: The high pessary, I feel is a dangerous procedure in many cases and that only in the hands of the expert should it be used. The high pessary becomes in many instances an irritation, acting as a foreign body, and I believe many cases call for surgical procedure that otherwise would have escaped had it not been for the pessary. I say it should be used by one who is expert. I believe otherwise a cotton or wool tampon should be used.

I also appreciate the fact the doctor brought out that we can use the portion of the round ligament which is strong, in performing the Gilliam operation.

I would like to ask the doctor, in closing, if he will mention the modification which he has adopted of the Gilliam operation. Give us a little technic along that line.

DR. J. F. CHANDLER, Oregon: Of course I am a country practitioner, and we often meet with these cases. I like the way the doctor has put it in regard to ascertaining the cause first of all, because if we know the cause we know how to proceed. But we practitioners in the country have no means of knowing the cause and for that reason, in some instances we are not able to diagnose the case. Dr. Lockwood mentioned the cotton tampon. My experience is that it would be all right if you had the patient in town, but where they have to go several miles to have it introduced that is a different question. But when we are up against it there is nothing to do but to refer the case to someone who does know, and not undertake to do that which we are unable to do. If we are unable to ascertain the cause, be honest enough to turn it over to someone who does know how. I remember something I heard in a lecture in school, and the lecturer put it this way—place yourself in the position of the patient and if there is nothing to be gained do not operate. We might put it this way—if you do not know, do not go at it blindly but refer the case to someone who does know.

DR. DORSETT, St. Louis: In regard to the cause of this condition will say that it is only found after very careful observation and continued study. We cannot expect to come to a decision in regard to the cause of sterility by one examination. In those cases I have referred to, that went to operation it was only as a last resort, and then the retroversion was not corrected because the woman was sterile but because she had certain symptoms that were caused by retroversion. In regard to retroversion from traumatism, I will admit that this is a rare condition, but we do see these cases. I personally know of three instances of young girls whom I would class as having received a traumatic retroversion. One girl was thrown from a horse and immediately had symptoms referable to the pelvis and on correction of the retroversion the symptoms immediately disappeared. Another girl fell in a swimming tank and immediately had retroversion; another one fell on the ice.

In regard to technic of the Gilliam operation or the modification, will say that it consisted in drawing the round ligament well through an opening in the peritoneum, rectus muscle and fascia and in "fanning" them out on the fascia. Patients used to complain of a considerable amount of pain in the region but since fanning these ligaments out, and suturing them to the fascia by interrupted sutures, this has been eliminated. In some cases where we have very lax ligaments it is necessary to pull more of the ligaments through than normal, although I never pulled the ligament across the median line, as some do. If these ligaments are pulled through tight enough the loops on either side are eliminated.

VAGINAL DRAINAGE IN PELVIC CASES*

FRANK HINCHEY, M.D.
ST. LOUIS

In recent years the conviction has been growing in my mind that we do not resort as often as we should to the advantages of vaginal drainage in the treatment of certain abdominal operations. In my own hands the results of such drainage have been so uniformly gratifying that, in observing the work of others at various clinics, I have been surprised to note that this aid to treatment was not used in the cases in which I believed it positively to be indicated. It is hoped that the presentation of this paper may evoke discussion, which will carry conviction of the value of this measure to those who have not practiced it at all times, when any drainage was demanded, for the majority of pelvic troubles.

In this discussion, I do not wish to emphasize the use of the vagina as the route of attack for pelvic troubles, but to consider such vaginal drainage as a part of the treatment in abdominal operations, for pelvic lesions particularly.

With these limitations then, let us consider what laparotomies should be terminated by the use of a vaginal drain.

1. When in the course of any abdominal section for a pelvic ailment, we deem it advisable to use a suprapubic drain.

2. When, in the course of any abdominal operation, an intestine, ureter or bladder may be injured—even if said injury be quite neatly repaired.

3. When, in the separation of adhesions, a portion of suspicious tissue is left in the pelvis, or there is troublesome oozing, or any infectious material may have escaped during the operation.

4. In all operations which have caused much traumatism, or much handling of the parts, as in difficult hysterectomies, ruptured ectopic pregnancies, or cases attended by much loss of blood.

These indications for any drainage seem to us quite well founded, and we have believed that the use of a drain, through the culdesac, has saved lives for us in some wretched cases. Before the use of such drainage, these cases always caused a stormy convalescence, with the attendant worry to the operator. For many years we have not used a suprapubic drain and thoroughly believe all the evils ascribed to such drainage are true. You remember Yates demonstrated that a drainage tube ceased to drain the peritoneal cavity after a few hours and was rather a menace in producing dangerous adhesions, fecal fistulae, hernia and like evils. But cannot the same be said of a drain placed in the

culdesac? At first thought this might seem true, but I believe the remarkable results obtained with the use of vaginal drainage, as contrasted with the suprapubic route, must mean that in some way we really do get more ideal drainage by the vaginal route. I believe we get drainage because the drain is favored by gravity, being placed at the very bottom of the pelvis, and the secretion flowing from the drained area towards the drain prevents adhesions from readily forming around the end of the drain. Also, adhesions cannot form where there is active outpouring of peritoneal secretions. This secretion liquifies any purulent exudates readily and gravity favors their extrusion through the open culdesac. At the same time adhesions form above the site of such infective areas—adhesions which are to prevent invasion of the general cavity. Thus, even though it be impossible to close over the raw surfaces with peritoneum, there is established a safe drainage current into the vagina, and eventually we have left a walled-off pus cavity in the most dependent part of the abdominal cavity. Then, too, the vaginal drain has the great advantage over the suprapubic drain in the fact that it projects only an inch or so into the general cavity, so that, while adhesions form around the suprapubic drain in a few hours, and nullify its use, this cannot occur with the vaginal route. The infectious material, gravitating to the lower part of the pelvis, may find an easy exit, through gravity and capillarity—the two real measures in drainage, as emphasized by Coffey.

I believe the suprapubic drain is unsurgical, and, too, I can see no reason for the use of a combined suprapubic and vaginal drain—the so-called through and through drain—both of which I have abandoned with much success. The arguments and experiments of Yates and others are too convincing.

A word may be said in regard to the advisability of using the vaginal route as a point for attacking abscess formations in the pelvis. The ease of access to such collections tempts one strongly, but the measure is hardly good surgery, for though we afford exit to the pus, we cannot remove all the involved structures and our work is of a makeshift order. I confess I have, during the past year, felt myself forced to limit my work to such a procedure in one case. The woman was very obese and after the abdomen was opened, the entire pelvis was found to be filled with giant pus tubes and vast adhesions. Her heart and respiratory organs did not tolerate the Trendelenburg position, causing the anesthetist much alarm. The abdomen was closed hastily and, without further anesthesia the culdesac was opened through the vagina. This opening was made large enough with the fingers to permit making some search for the tubes. The drainage which resulted seemed to

* Read at the Sixty-First Annual Meeting, Missouri State Medical Association, Jefferson City, May 7, 1918.

remove all the infectious material, for she certainly recovered beyond our expectations—that is, she did not require the subsequent operation which we felt would be necessary. But I must voice my protest against the advice of some writers, who drain abscesses through the culdesac, and immediately open the abdomen to complete the removal of the infected organs. While I am sure we can do plastic work of the vagina and perineum before opening the abdomen, I do believe we assume entirely too much risk in opening up a pus cavity at such time. For, even if we could hope to evacuate much of the pus per vaginam at the time, we certainly could not evacuate all of the pus, and our work must be attended by more danger than that involved in prompt control of any leaks while working from above, provided, of course, we complete our work by placing a vaginal drain.

This much for the usual pelvic infections. How shall the dreaded streptococcal lesions following puerperal sepsis be attacked? I believe, as Cullen has advised, it is far safer to reach these extraperitoneally, through an incision above Poupart's ligament, by lifting up the peritoneum and opening the broad ligament. We had one case of such infection, however, which was subjected to laparotomy, excision of the tube which ruptured slightly, and drainage through the culdesac. Here there can be no doubt the vaginal drain saved her life.

The technic is quite simple, apparently, and is fully described and illustrated in all the textbooks. I do not believe the laparotomy sheets should be disturbed to permit the assistant to see the vagina, but it is essential that he be able to recognize the cervix by the touch, while he passes a long instrument, with the other hand, back of the cervix. The literature contains quite a number of cases in which the instrument was passed through the urethra and others through the rectum. I had a case in which the drain was passed through the rectum, thence through the vagina and finally reached the culdesac. Happily, the error was discovered in time to place the drain in a more direct route. It certainly speaks well for the measure that all these cases recovered; and this we should expect when Francis Reder has reported cases of abscesses in the culdesac, in pregnant women, which he has successfully drained by puncture through the rectum.

I believe the best form of drainage is a split, rubber tube of at least one-half inch in diameter, which tube encloses a rolled piece of gauze. This tube is usually placed about one inch above the base of the culdesac, and its side is sewed to the edge of the cut in the base of the culdesac, or to the stump of the cervix. It extends to the vulva. The vagina is not packed. The tubal drain is, of course, passed

from the abdomen and grasped by the forceps which an assistant has passed from the vagina. Assuredly, too, the vagina has been prepared before the operation; the assistant wears gloves and every effort to assure asepsis is made, as thoroughly as such procedure can be done in the vagina. Personally, I do not believe the work when completed remains clean until the patient is off the table, and I disregard the criticism of those who say such drainage must be dangerous, because the tract must be infected, as "it is not possible to render the vagina aseptic." But even if it could be made aseptic, how could it remain clean when it has been shown every drainage tract, even through a clean abdominal wound, soon shows the presence of infectious bacteria? But we know we get primary union in plastic work of the cervix, vagina and perineum even though, as we also know, if we but investigate, that the region is very far from aseptic. Is it that, as some assert, the colon bacillus does not harm our work, or rather is it not due to the presence of the vaginal secretions? What saves the recently delivered woman in the great majority of cases where common cleanliness is not known? We have all been asked a week or two after delivery to repair the pelvic outlet of women who have been torn into the rectum. We have found the vulva bathed in a mixture of urine, feces and lochia, yet she has had no uterine infection, though her physical exhaustion, loss of blood, etc., should cause us to expect such infection.

The tube is usually not disturbed, but the vulva covered with a moist aseptic pad, which is kept moist with rubber tissue. The moisture favors capillary drainage. By the time the catgut stitch is absorbed, the tube is usually expelled. No douches are given at any time. The wound in the culdesac is not probed. We have never feared too early closure, as we believe with Van Buren Knott, a drainage tract will not close until it has served its purpose, provided the exit is kept moist, which is the normal condition of the vagina.

In conclusion, we believe:

1. Vaginal drainage of the culdesac is the only efficient form of drainage of all pelvic conditions where drainage is desired.

2. Vaginal drainage is the safest procedure in the presence of infection, free oozing or much loss of blood, which loss of blood lowers the resistance even to slight forms of infection, with which the patient might cope successfully without such hemorrhage.

3. The vaginal tube should be sutured with catgut to retain it a sufficient length of time.

4. Post-*puerperal* infections should be treated by retroperitoneal drainage over Poupart's ligament.

Humboldt Building.

SOME CLINICAL OBSERVATIONS ON THE
SUMMER DIARRHEA OF INFANTS*

JOHN ZAHORSKY, M.D.
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You are familiar with the two most important theories in regard to the etiology of summer diarrhea in infants. Three years ago I read a paper before this society in which some evidence was offered to show that the heat theory was inadequate to explain the phenomena of the disease. In the words of Cooke: "Something more than heat is necessary to cause diarrhea in the infant."

Two years ago I took up the study again, more particularly from the clinical standpoint. In the study of the cases it was found that while we find a variety of acute indigestions in young children during the summer which are accompanied by vomiting and diarrhea, there are three groups which are easily differentiated clinically.

First, fermental diarrhea. This is due to the excessive fermentation of carbohydrates and may occur at any time during the year. It occurs especially among infants who are fed the more easily fermented carbohydrates, as Mellin's Food, malted milk and malt soup extract. It is prone to occur in infants fed on cow's milk mixtures containing a high sugar content, such as condensed milk. In these cases the stools are very acid and irritating to the buttocks. Fever does not occur and most cases are promptly relieved by excluding the fermentable carbohydrates from the diet. Only in a small number of cases in which a severe irritation of the intestinal mucosa has been produced is it necessary to resort to buttermilk preparations. The stools contain mucus but not many leukocytes. My studies do not show whether these cases occur more frequently in the summer. It is probable that the hot weather reduces the tolerance of the infant for food and the impression is general that these cases are more frequent in the summer than in the winter.

Second, the dysenteric group. These are well known clinically by the severe symptoms of fever and prostration, by the local symptoms of abdominal pain and tenesmus, and by the characteristic bloody mucous passages. These diseases cause a high mortality, and last year (1917) comprised about 10 per cent. of all clinical cases.

Third, summer diarrhea proper. This is the most common form of summer disease. The onset is characterized usually by vomiting and fever, sometimes convulsions. The diarrhea may begin at once or not for one or more days.

The stools may be green, yellow or brown, and on the first day may be very acid. The distinctive character of the stools is that they are watery. The baby has from five to thirty of these watery stools daily. The fluid nature of the stool is best shown when it is drawn from the rectum by means of a tube.

In distinction from fermental diarrhea the disease is protracted. It does not yield promptly to a change of diet. The diarrhea persists for several days, sometimes for several weeks. Gradually the stools show more consistency and often mucus and occasionally microscopic pus. Blood is rarely observed.

The fever may last one or two days only. Severe symptoms of intoxication at the onset indistinguishable from the so-called alimentary intoxication is very common. The typical syndrome of acidosis may occur at any time. Symptoms of exsiccation of the tissues, as shown by the dry, inelastic skin, will sooner or later be observed in protracted cases.

Two years ago I began the systematic study of the stools for evidence of inflammation. I was surprised to find an enormous number of pus corpuscles in the stools in all typical cases of summer diarrhea proper. These pus corpuscles are composed principally of lymphocytes and lymphoid cells, especially the large germinal cell, which is found in the solitary follicles of the intestine.

Summer diarrhea is a follicular disease and undoubtedly an infectious process, as we are not familiar with any poison except bacteria, which will produce pus clinically.

A reasonable explanation of the process may be offered. The pathogenic bacteria gaining admission into the epithelial lining are carried to the nearest lymphoid follicle. Here they cause an inflammation and the defensive forces finally extrude the offending bacteria together with leukocytes and lymphoid cells. As soon as this is accomplished, the lymph follicle heals, the columnar epithelium covering it is regenerated and no vestige of the disease remains.

The severity of the disease depends primarily on the number of follicles infected, and this again on the dose of the original virus. It is probable, too, that the infection may extend from one follicle to the other, and in this way cause an augmentation in the severity or duration of the diarrhea.

The cure depends almost entirely on the defensive powers of the body. If the previous condition of the baby is good, if it has been properly fed, the diarrhea is promptly checked. On the other hand, if the defensive powers are poor, the disease may rapidly be fatal or run a protracted course.

It is necessary to lay some stress on the value of studying the stools under the microscope and

* Read before the St. Louis Medical Society, May 18, 1918.

looking for these pus cells. It is a simple and generally accurate method of differentiating the fermental diarrhea from the infectious enteritis. Often this method of examination will disclose the bowel to be the seat of a morbid process when the other symptoms are puzzling.

CASE 1.—A little girl, 3 years old, in August, 1917, was seized with vomiting and convulsions. The cerebral symptoms persisted and on the second day of the disease the attending physician suspected the presence of meningitis. I was asked to do a lumbar puncture. The child lay in a semicomatose state, with some rigidity of the neck and extremities. The breathing, however, suggested the hyperpnea of an acidosis and inquiry into the condition of the digestive tract led to the findings that the patient had passed several loose stools that day, which were attributed to purgatives. A catheter was passed into the rectum and some slimy greenish feces obtained which under the microscope was found to be a mass of pus cells. The diagnosis of enteritis was confirmed by the subsequent history of the case.

CASE 2.—A female infant, 2 years old, seen with Dr. Schaub, presented some mild cerebral symptoms, including rigidity of the neck. The child had passed several offensive, green, mucous stools and the diagnosis of meningismus seemed probable. Examination of this stool showed the absence of pus cells. A lumbar puncture yielded a turbid spinal fluid containing meningococci.

These cases illustrate how this test may be used in practice to differentiate certain symptoms depending on an enteritis from similar symptoms depending on some other inflammatory condition.

There is one difficulty, however, which may lead one astray, and that is that not all infants pass pus in the stools on the second or third day of the disease even when an enteritis is present. A prompt discharge of pus cells is a curative means, but the child's resistance may be such that many days of illness may pass before this discharge takes place.

CASE 3.—A. F., aged 9 months, had been fed on condensed milk since birth. It was taken to the country during the summer of 1917 and some raw cows' milk administered. Within two days severe symptoms of vomiting and diarrhea with repeated convulsions threatened the life of the infant. After one week's illness it was brought to St. Louis.

The infant presented the typical picture of severe intoxication. The eyes were sunken; the face, pale and expressionless; the extremities cold; the skin dry and inelastic. The breathing was deep and hurried; the pulse, feeble. The stools were light in color, five or six were passed daily, slightly acid and offensive. The rectal temperature ranged from 99 to 101.

Under the therapeutic use of alkalies, water and moderate doses of carbohydrates, the baby gradually improved.

Repeated examinations of this infant's stools extending over several days, failed to demonstrate more than a moderate increase in the leukocytes of the stools. On the fourteenth day after the onset of the symptoms there was a sudden increase in the diarrhea, and then for the first time the pus was discharged in enormous quantities. For several days the stools were a solid mass of cells and recovery rapidly followed this purulent discharge, while previous to this very little progress had been made in the cure of the patient.

In all cases of dysentery pus cells are easily demonstrable. In many cases the stool consists almost entirely of pus, which is readily discernible with the naked eye. It is a new observation, however, that the watery stools of summer diarrhea also contain pus at some time during the course of the disease, and it is this fact that I desire to offer as a guide in the diagnosis and treatment of summer diarrhea.

Since summer diarrhea, excluding the cases of fermental diarrhea, is an infectious process it should receive the same attention as an infectious process elsewhere; that is, due attention should be given to the healing power of the infant. It is a mistake to give these infants a preliminary purge without taking into consideration whether it is necessary. Calomel, in my estimation, predisposes to acidosis and I have ceased giving it. Castor oil often upsets the stomach and ricinoleic acid is often very irritating to the intestine. My favorite laxative is a mixture of milk of magnesia and aromatic syrup of rhubarb. It should be remembered that the purpose of the purgative is not to remove the infection from the solitary follicles, but to remove fermented and putrefactive material from the alimentary canal. This may often be best accomplished by an enteroclysis.

The period of starvation should not be long; twenty-four hours is long enough. Meanwhile water and alkalies must be liberally supplied to the body. For there is one fact which metabolic studies have established; namely, that diarrhea robs the body of alkalies and this predisposes to acidosis. The administration of bicarbonate of soda or the citrates of soda and potassium has become a routine preventive measure in diarrheal diseases.

The symptoms of intoxication rapidly disappear when the pus is discharged and it is still questionable whether any of our therapeutic means hasten this process. In most cases the toxic symptoms disappear in twenty-four to forty-eight hours even when the patient is not starved. Starvation for a short time gives rest to the bowel and probably diminishes the septic absorption from the follicles. After this rest the principal object in treatment is the feeding of the baby whose intestine is injured. Any excess of food is hurried through the intestine and goes more to feed the saprophytic bacteria in the lower bowel than the patient. The putrefactive and fermentative products irritate the bowel and increase the diarrhea.

Of all the food elements the carbohydrates are most essential. If Schloss is right that an impaired renal function is present in intoxication, the administration of protein substances are contraindicated. Do not, therefore, give milk, beef peptones, egg, or whey in summer diarrhea. Give carbohydrates. These, in chil-

dren over 7 months of age, are best administered in the form of gruels. Barley gruel, rice gruel, wheat flour paps, corn meal mush; these are the substances which are safest in summer diarrhea. The babies can live on these for many days or even weeks, especially if a little casein, or dry milk is gradually added. These cereals are especially valuable, since they do not ferment readily. Cane sugar or milk sugar may be safely added. If putrefaction with weakly acid or alkaline stools is marked an easily fermentable malt preparation may be added cautiously.

Carbohydrates are known to favor the hydration of the tissues, and it is doubtful that exsiccation of the tissues will occur as long as carbohydrates and water can be administered. Buttermilk preparations should be reserved for convalescence and for young infants who have a very feeble power to digest starches. Occasionally, even an older infant does not absorb cereals, and these may undergo a strong fermentation with acid irritating stools; then buttermilk must be used. Also in infants who have suffered for a prolonged period from protein starvation, e. g., infants fed on condensed milk or malted milk, or very weak cows' milk mixtures, should be placed early on buttermilk preparations.

It is well to restrain excessive peristalsis with opium and belladonna. Bismuth has little effect except to diminish intestinal fermentation which is best controlled by diet. Tannin preparations are most serviceable in protracted cases when the irritability of the intestines persists.

In our study of these cases we have found that relapses are very common. These are not always due to an error in diet as is often assumed but to a reinfection of some other part of the intestines. In several cases, after the infant seemed nearly well and the pus cells had disappeared from the stools, a recurrence of the diarrhea was coincident with another discharge of pus cells. There is no way to prevent these relapses.

A serious complication is the development of acidosis. The symptoms are stupor or drowsiness, sometimes convulsions, and the characteristic deep breathing, hyperpnea. We have not had a single case in about 80 cases of diarrhea last summer. Three cases were seen in consultation. One was a typical dysentery in a boy 5 years of age, another was gastroenteritis in a girl 2 years of age, the third was in a child about 18 months of age. All recovered when sodium bicarbonate was given in large doses with a carbohydrate food.

The exsiccation of the tissues is exceedingly difficult to treat. The hypodermic, intravenous, or as it has been recently recommended, the

intraperitoneal administration of salt solution, has only a fleeting stimulating effect. The hydration of the tissues takes time and must depend on a much more elaborate process than the flooding of the blood with water. There is something wrong with the tissues, they do not imbibe water until the infectious process is better and some mixed food has been absorbed. I have been impressed with the clinical value of fruit juices with the water in these cases—orange juice, grape juice and peach juice have been used. In severe cases of dehydration I always give a little acid fruit in the water sweetened. Several severe cases might be reported that were favorably affected.

4435 West Pine Boulevard.

THE USE OF UNNA'S DRESSING IN THE TREATMENT OF LEG ULCERS

H. E. HAPPEL, M.D.

Captain, M. C., U. S. Army

ST. LOUIS

No condition taxes the patience of the physician or causes the patient more suffering and disappointment than a leg ulcer. The plans of treatment suggested are numerous and the list of remedies in the works on therapeutics exceeds in length that of any other condition, an excellent criterion of the lack of uniformity in results. My object in presenting this paper is not to introduce anything new but to direct the attention to an old, though not widely used, and very efficient method of treatment of leg ulcers.

Whether it is traumatic, syphilitic, or due to varicose veins, the failure to heal is due to insufficient circulatory activity, lowering the resistance of the tissues to infection and retarding the process of repair. Traumatism, however slight, is the starting point of the ulcer and infection, usually of a low grade, is responsible for its spreading. Syphilis here as in other parts of the body inhibits the reparative efforts of the tissues, and must always be combated with antisiphilitic medication, in addition to the local treatment.

Ulcers may be of various sizes, shapes and locations, depending more on the site of the initial traumatism than any characteristic, selective action of the causative condition, although many text books tell us that syphilitic ulcers are always multiple and occur in groups just below the knee, and varicose ulcers are most often on the anterior aspect.

The first indication to be met in the treatment of leg ulcers is to promote circulatory activity, best accomplished by rest in bed, which is the ideal treatment though usually imprac-

tical. The next best thing is a snugly fitting bandage applied from the heads of the metatarsal bones to just below the knee, furnishing support to the superficial veins, instead of a few circular turns holding the medicament in contact with the ulcer, as is usually seen. The bandage may be of gauze or muslin, preferably the latter, and over this it is well to apply a crinoline bandage to hold it in place. The medicament to be used depends on local conditions: the silver stick for exuberant granulations, balsam of Peru for sluggish surfaces, etc. Where there is considerable cellulitis, moist saline or boric packs are advised until it disappears. Strapping with adhesive plaster is very useful where the edges are indurated or undermined. The proper application of the supporting bandage is, to my mind, of far greater importance than the selection of the remedy to be used.

The plan of treatment which has been most successful in my hands and has never failed, where the patient was under sufficient control so that the ulcer could be dressed as often as necessary, consists in the use of Unna's dressing. It is made up of gelatin, four parts; zinc oxid, four parts; glycerin, ten parts, and water, twenty parts. The gelatin is broken up into small pieces and placed in the cold water, which is then heated in a water bath until it is melted. The glycerin is stirred in and the zinc oxid added, little by little, until thoroughly incorporated. It is then poured into a can with an airtight cover and set aside until needed. It solidifies when cold and before application must be placed in a vessel of water and heated until melted, which takes place at 110 F., a temperature which can be borne without discomfort on the skin.

The leg is shaved, if there is much hair, cleansed with soap and water, the ulcer with peroxid, and dried. With an ordinary ten cent paint brush the liquid is painted on the ulcer and the leg from the level of the head of the fibula to the metatarso-phalangeal articulations. Over the ulcer a square of six or eight thicknesses of gauze is placed and a coat of paint over this. A two inch gauze bandage is applied snugly from the toes to just below the knee, carefully covering the heel. A second coat of the dressing is painted on and covered by gauze bandage. A third coat is covered by a third bandage and over this a gauze bandage is applied to protect the clothing until it is dry when it may be removed. This makes a clean, neat, snug, elastic boot, which does not interfere with wearing the shoe or walking.

In from four to eight days, according to the quantity of discharge, a stain will be noticeable over the site of the ulcer, when a window must be cut so that it may be inspected. If the discharge is considerable the dressing should be

removed, the parts cleansed as before and a new one applied. If not, local applications may be made to the ulcer through the window and dressings held in place by a bandage until the boot becomes too loose when it must be taken off. The ulcer will be found to be noticeably smaller, with a floor of healthy, granulating tissue at the edges reaching the level of the skin and surrounded by a bluish border of newly formed epithelium. The second dressing can be worn for a longer time, sometimes for ten or twelve days, before the staining is perceptible.

As soon as the ulcer becomes clean (free from infection), and approximately level with the skin, grafting should be performed. The advantages are rapidity in healing and the formation of skin more nearly approaching normal, having greater elasticity and thickness, permitting freedom of movement and rendering subsequent injury less likely than when covered with the thin epithelium formed by granulation.

The operation is very simple and can be done under local anesthesia, but better under a general anesthetic. The ulcer and thigh from which the skin is to be taken are cleansed with soap and water, no antiseptics being used; the thigh shaved if necessary. The skin of the thigh is made taut between blocks held by the assistant on the inner and outer aspects and a thin ribbon is cut with an ordinary razor, using a saw-like motion. Care should be exercised to insure complete separation of the graft before attempting to remove it. It is transported on the blade of the razor to the ulcer and then with a straight needle, or applicator, the free end is held in its proper place and the razor withdrawn slowly so that the ribbon of skin falls smoothly on the surface of the ulcer. It must lie flat, with no air bubbles beneath, no edges turned under, and the grafts should touch but not overlap the skin edges. Other grafts are cut and placed in position, with a small gap intervening, until the surface of the ulcer is covered. After each one is placed, the razor and thigh must be wiped clean and dry, as blood interferes greatly with the process.

The ulcer is then covered with narrow strips of gutta percha tissue, placed checkerboard fashion, over this gauze wet with normal saline solution and then gutta percha tissue, held in place by a bandage. The gauze is removed daily, the grafts flushed with warm, normal saline solution and fresh moist gauze applied. On the fifth day after operation it will be found that the grafts have adhered sufficiently to permit the removal of the gutta percha strips. Moist gauze is reapplied, unless the skin has become water-soaked, in which case dry gauze is employed but greater care must be used in dressing it to prevent pulling off of some of

the grafts. In about two weeks the grafts will have spread sufficiently to cover the whole ulcer. It is necessary that the patient be kept in bed, or at least with the leg in the horizontal position, for a week; after that Unna's dressing may be applied and the patient permitted to walk about.

When the ulcer has healed it is best to have the patient wear a supporting bandage of stockinette, or elastic webbing, applying it on arising and removing it on retiring, from the toes up, until there is no longer a tendency to edema.

The following case is typical and is reported in detail to illustrate (1) the absolute necessity of a supporting bandage from the toes up, (2) the efficiency of Unna's dressing in promoting granulation, and (3) the rapidity of healing after skin grafting.

G. R. W., aged 38, a civil engineer, on Nov. 23, 1917, was run over by an automobile, sustaining a contusion and abrasion of the skin of the right leg in the outer aspect of the middle third. He was treated as an outpatient at the Missouri Pacific Hospital with local applications, held in place by circular turns of bandage, but an ulcer developed at the site of injury and in spite of the variety of remedies tried the ulcer remained stationary until Jan. 17, 1918, when he was admitted to the hospital. The Wassermann reaction was negative. He had an oval-shaped ulcer, 3 inches long by 2 inches wide, on the outer aspect of his leg, the floor of which was covered by dark red, sluggish granulations, the edges undermined and indurated, and giving off a profuse, sero-purulent discharge.

Moist boric dressings, held by a gauze bandage from the toes to just below the knee and covered by crinoline were used, with decided diminution in the discharge and some progress toward healing until January 24 (seven days), when Unna's dressing was applied. On the 28th, because the dressing was stained over the ulcer, a window was cut, the ulcer cleansed with peroxid and a fresh gauze dressing bandaged on. This was repeated on the 30th, but on the 31st the old dressing was removed and the ulcer was found to be clean, the granulations bright red and filling in rapidly. A fresh Unna's dressing was applied and retained until Feb. 8 (eight days) when it was removed. The granulations were found to be of a healthy, bright red color and almost level with the skin. A moist, saline pack was put on and the patient prepared for operation. The next day, February 9, skin grafting after the Thiersch method, was performed, the grafts being taken from the thigh.

The grafts were held in place by ribbons of gutta percha tissue arranged checkerboard fashion, covered with moist saline packs and over this gutta percha tissue to retain the moisture. These packs were removed daily, the surface of the ulcer flushed with saline and fresh gauze replaced. On the fifth post-operative day the strips were removed and it was seen that the grafts were "taking." On the fourteenth day after the operation the ulcer was practically healed, only two small spots about $\frac{1}{4}$ inch in diameter remaining. Unna's dressing was applied and the patient allowed to go home. On the nineteenth day it was removed and the ulcer found to be healed entirely. A supporting stockinette bandage was put on, to be worn during the day and removed on retiring, until the tendency to edema disappeared.

On April 1, 1918, the scar was elastic, freely movable on the tibia and there was no pain or swelling.

Recently in a case of partial amputation of the foot, where the flaps sloughed, after failure of the electric pack and other methods of promoting granulation, I have resorted to the use of Unna's dressing with immediate improvement and a most satisfactory result. In raw surfaces following burns or wounds with loss of skin it may be used in the same way with very gratifying results.

In conclusion, I wish to emphasize the absolute necessity, in the treatment of leg ulcers, of a supporting bandage from the heads of the metatarsals to just below the knee. Unna's dressing is economical both as to the cost of the ingredients and materials used, since it does not have to be changed for several days, it is easily applied, cleanly, elastic, promotes rapid granulation, furnishes proper support and is the ideal dressing for ambulatory cases.

Wall Building.

A MEDICAL DIVISION IN THE PROVOST MARSHAL-GENERAL'S OFFICE

One of the important functions connected with the application of the selective service law in raising our Army is the physical examination of registrants. This work may be regarded as fundamental. If it is not satisfactorily done, some men who are physically fit will be rejected for physical causes and others who are not physically fit will be accepted. In the first case the nation loses in its fighting man power; in the second, the nation suffers a great financial loss in connection with inducting registrants who are returned to their homes, and later on through the payment of compensation for disability. The recent establishment of a medical division in the Provost Marshal-General's Office is a commendable recognition of the importance of these physical examinations. The first step in this accomplishment was the appointment last February of Doctor, now Colonel, Frank Billings, who was assigned as medical aide to the Provost Marshal-General. But since that time the medical phases have developed to such an extent that the enlargement of this position into a specific division in the Provost Marshal-General's Office inevitably followed. The personnel of the medical division consists of Col. F. R. Keefer of the regular medical corps, chief, assisted by Major Hubert Work and Capt. D. Chester Brown. This personnel will be enlarged as required. The new selective service law will involve the registration and physical examination of some 14,000,000 men. This will have to be accomplished in a much shorter time than was allowed to the same duties connected with the less than 10,000,000 men covered by the first selective service law. It is possible that the present machinery, so far as physical examinations are concerned, is not ideal. There is no doubt that some of the criticisms of the method of conducting physical examinations of registrants in the past have been to a certain extent justified. But there is no time to create new machinery, even though such might be necessary to secure ideal conditions. The medical division in the Provost Marshal-General's Office is already correcting faults here and there. We may look forward to the physical examinations of the new increment to the Army with optimism and with the hope and belief that there will be less cause for criticism in the future than, perhaps, there was in the past.—*Jour. A. M. A.*, Aug. 31, 1918.

THE JOURNAL

OF THE

Missouri State Medical Association

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OCTOBER, 1918

EDITORIALS

RESCINDED

The action of the Missouri State Committee, Medical Section, Council of National Defense, requesting the Missouri State Medical Association and its component societies to adopt certain restrictions, which were detailed and printed in the last issue of our JOURNAL, applying to the admission of new members and the continuation of membership in the organized medical profession has not been approved by the Central Governing Board of the Volunteer Medical Service Corps at Washington, because it is coercive and contrary to the volunteer spirit of the corps. A statement from the president of the Volunteer Medical Service Corps reads:

THE VOLUNTEER MEDICAL SERVICE CORPS
AN APPEAL TO EXECUTIVES, STATE COMMITTEES AND
COUNTY REPRESENTATIVES

No official or committeeman representing the Volunteer Medical Service Corps, or the General Medical Board of the Council of National Defense, is now authorized, or has been authorized to favor any organized or unorganized method of coercion in inducing members of the medical profession to join the Medical Corps of the Army or Navy, or the Volunteer Medical Service Corps. Our committeemen are especially urged against favoring any movement that would threaten to impair a medical man's standing in his local, state or national society because he refused to enroll in the Army or Navy, or the Volunteer Medical Service Corps. It must be made clear that the Volunteer Medical Service Corps is a volunteer corps which has for its object the enrollment and classification of the profession, and tendering to its volunteers an insignia that will clearly set forth that he has offered his services, when such services are needed, to his government. Patriotism cannot be created by coercion. It also must be made clear that the Volunteer Medical Service Corps has for its object classification that may guide the Army, the Navy, the Public Health Service and the Provost Marshal officials and civilian institutions and communities in providing for their needs to the best advantage. The object of the corps is not to disturb any medical man in the performance of any duty to which he has been assigned by any government agency either for service at the front or at home that is helping to win the war.

(Signed) EDWARD P. DAVIS, President,
Volunteer Medical Service Corps.
FRANKLIN MARTIN, Chairman,
General Medical Board.

At the meeting of the State Committee, Medical Section, Council of National Defense, held in Kansas City, September 22, the action of the committee was rescinded and its secretary was instructed to notify all county auxiliary committees of the Council of National Defense to inform county medical societies that the request to limit membership in the manner indicated was rescinded.

Those county societies which have adopted the restrictions sent out by the State Committee, Medical Section, Council of National Defense, should rescind the action at the earliest possible date, and no action whatever should be taken on the subject by those county societies which have not yet adopted the measure.

THE WAR CRY FOR NURSES

In the great drive for Army nurses, some newspapers have unintentionally created the impression that nurses were not enlisting in sufficient numbers, failing to give the reasons for this apparent unreadiness to answer the call.

The nursing profession, like the medical profession, is so intimately intertwined in the lives of all persons with thoughts of mercy and compassion for the sufferings of others, that any suggestion of hesitation by nurses to fly to the relief of the sick and wounded soldiers in this time of need is an assumption that does great injury to the large number of earnest and self-sacrificing women who have dedicated themselves to alleviate the sufferings of the sick and wounded. Believing that the reports as published did not correctly interpret the conditions, we made inquiry at the headquarters of the Southwestern Division of the American Red Cross, in St. Louis, for a statement of the actual condition, and in response to our inquiry we received the following reply:

It is unfortunate that some of our newspaper correspondents have reported in their publications that the nurses are not responding to the call for their services in the military hospitals. I feel that is an erroneous report. Of all the hundreds of nurses I have met and talked with in the Division I have never found any that can be classified as "slackers." It must always be remembered that the large majority of nurses are self-supporting, and many not only have themselves to support, but have responsibilities to some member of their family. It is not easy to adjust the private life at once to the war relief service. I have in all my interviews with newspaper men wanted to impress them with the fact that all that was necessary was to carry the message of the very urgent and pressing need to the nurses and that the American nurses would respond as soon as they knew of this need.

Only in an exceptional case is the nurse able to respond at once. She places her application for enrollment, setting a definite date when she is available for service, and then immediately makes her plans for such service. It must also be remembered that a large number of the nurses are physically ineligible. Possibly of the 65,000 nurses in this country only

50 per cent. of them will be eligible for active military service. Then too they must meet very definite requirements. They must be within a certain age limit, are not eligible if they are married and are encouraged not to enter military service if they are holding the important position of training school superintendent or instructing and preparing more nurses for service.

I want to assure you that it is a real grief to the many nurses who must deny themselves the privilege of giving service, and I want to assure you that the nurses are responding at present. There may have been some procrastination on their part in the early months of the war, but simply because they felt they were needed more at home and it was hard for them to recognize that they might be more badly needed elsewhere.

Will you, any time the opportunity offers itself, correct any misunderstanding on this point?

We are glad to publish this statement because it presents the nurses' side of the question from an authoritative source. It shows that the nurse who is accepted for military service must be singularly free from physical defects and able to comply with certain very definite requirements not applicable to men, which of necessity limit the number of women available for military nursing. We are sure the nurses will give themselves to the service of the country as freely as, even more willingly than, they give themselves to their work in private life.

INVESTIGATE NEW SOCIETIES

Many of our members have received an invitation to join a medical organization styled "The Allied Medical Associations of America," and some of them, without investigation, have been inclined to accept membership in it. For their benefit and as a matter of general information we present some of the known activities of the secretary-treasurer of the new organization, Dr. L. M. Ottofy, of St. Louis, who seems to be the principal agitator for members.

Dr. Ottofy is listed in the medical directories as a graduate of the Homeopathic Medical College of Missouri, 1888. He is a pronounced antivaccinationist. In 1914 he sued the Board of Education in St. Louis in an effort to force his children into the public schools without being vaccinated, but the court sustained the Board of Education. In 1916, according to reports published in the newspapers, he was cited to appear before the prosecuting attorney of St. Louis on the charge that he had distributed alleged indecent cards at a political meeting. It is said some of the cards bore an indecent drawing of President Wilson. He was one of those scheduled to read a paper at the meeting of the Medical Society of the United States, an organization of fee splitters exposed by us in 1916. He has been exploited in the St. Louis newspapers from time to time as possessing a cure for cancer, and at one time it was stated that he had found a deposit for radium on a Missouri farm, location not given.

STUDENTS' ARMY TRAINING CORPS

The War Department urges that every young man who has been planning to go to college this fall should enter the institution of his choice as a regular student. If of draft age his registration will not prevent his enlisting in the Students' Army Training Corps into which he will be inducted about October 1. "By this voluntary induction," says the *Journal of the American Medical Association*, "the student becomes a soldier in the United States Army; he will be placed in uniform, be subject to military discipline, and will be given the pay of a private. The government also pays his tuition, housing and subsistence. Each college is provided with officers, uniforms, rifles and such other equipment as may be necessary, and essential teachers will be retained so far as is possible. The student soldiers will be given military instruction under officers of the Army and will be kept under observation and test to determine their qualifications as officer candidates and technical experts, such as engineers, chemists and physicians. After a certain period, men will be selected according to their accomplishments and assigned to military duty. A student may be assigned to an officers' training camp, to a non-commissioned officers' school, to a school for further intensive work in a specified line, or to a vocational training section of the corps for technical training of military value, or he may be transferred to a cantonment for duty with troops as a private. It is planned to have similar sortings and reassignments of men made at periodic intervals, probably at the end of each quarter, as the requirements of the service may demand. Students will not ordinarily be permitted to remain in the college units after the majority of their fellow citizens of like age have been called to military service. Exception to this rule will be made as the needs of the service require it in the case of technical and scientific students, who will be assigned for longer periods of study in specified lines."

Four hundred colleges throughout the country are cooperating with the government in training students for war services, including the following schools in Missouri: St. Louis University, Washington University, the State University of Missouri, Drury College of Springfield, Western Dental College of Kansas City, Park College of Parkville, Central College of Fayette, Kansas City Polytechnic Institute, Missouri Wesleyan College of Cameron, William Jewell College of Liberty, and the State Normal Schools at Springfield, Kirksville and Warrensburg.

THE ITALIAN TUBERCULOSIS UNIT OF THE AMERICAN RED CROSS

Announcement was made recently by the War Council of the American Red Cross of the personnel of the medical unit to sail for Italy to conduct a health campaign in that country, with the stamping out of tuberculosis as its particular objective. The movement has the fullest support of the Italian government, which intends to build permanently on the foundation laid by an educational campaign as complete and thorough as the Red Cross can make it. The sum of \$1,100,000 has been appropriated to carry on the work for the last six months of this year.

The Italian Tuberculosis Unit of the American Red Cross, as the organization will be known, will be under the supervision of Col. Robert Perkins, Red Cross Commissioner for Italy. It was on the suggestion of Mr. Perkins that the work was undertaken. Soon after his arrival in Italy he became convinced that the Red Cross should broaden the scope of its activities in that country beyond the lines confined to war work and help the Italian government in the fight against the spread of tuberculosis. He communicated this conviction to the War Council with the result that in a little more than six weeks the medical unit has been equipped and is ready to embark on its humane mission.

Included in the personnel of the unit, which numbers sixty persons, are many of the country's best known tuberculosis specialists, as well as physicians who have been very successful in the lines of work which they will be called upon to perform. The director of the unit is Dr. William Charles White of Pittsburgh, recognized as one of the leaders in the fight against tuberculosis in the Middle West. For ten months Dr. White has been director of the Red Cross tuberculosis unit in France. Dr. Robert H. Bishop, Jr., Commissioner of Health of Cleveland, is assistant director of the expedition. Other heads of departments are:

Dr. John H. Lowman, professor of clinical medicine at Western Reserve University, Cleveland, chief of the medical division; Dr. Louis L. Dublin of New York, statistician of the Metropolitan Life Insurance Company, chief of the division of medical statistics; Dr. Richard A. Bolt of Cleveland, connected with the health department of that city, chief of child welfare division; Dr. E. A. Paterson of Cleveland, chief of division of medical inspection of public schools; Dr. Robert G. Paterson of Columbus, head of the tuberculosis branch of the state health department, chief of the division of education and organization; Miss Mary S. Gardner, head of the bureau of public health nurs-

ing of the American Red Cross, chief of division of public health nursing.

The executive manager of the organization is Lewis D. Bement of Framingham, Mass., and the executive secretary is Miss Bertha M. Laws of Philadelphia. There will be eighteen nurses in the organization, the headquarters of which will be in Rome.

Ten traveling automobile dispensaries, three completely equipped for dental work and the others for general medical work, and fourteen motion picture machines will be taken along. It has been planned to have the publicity department attached to the unit start out several weeks in advance and awaken public interest in the movement. The motion pictures will follow with a display of health propaganada prepared in story form and then will come the members of the unit to organize the health work in each town.

NEWS NOTES

DENTISTS who pull teeth so registrants may escape military service will get themselves "pulled" by Uncle Sam.

LET no one deride the new custom of christening ships with milk instead of wine. Is not milk the best liquid for all newly-born?

MR. McADOO says the "public be damned" policy is adjourned too, and has enjoined upon all railroad employees the policy of "courtesy and efficiency."

PHYSICIANS on draft boards should not resign to volunteer for active service. The Selective Service Law says they are as effectively "drafted for this duty as are registrants who are selected for military service."

CAPTAIN M. L. PETERS of Cameron, now a member of the Medical Reserve Corps in training at Fort Riley, is wearing a handsome gold wrist watch presented to him by admiring friends and patients at home as a memento of their esteem.

DR. W. S. GALE of Osborn was painfully injured, August 28, and narrowly escaped very serious injury when an automobile collided with his car at Maysville where he had gone to attend a chautauqua meeting. Dr. Gale was thrown against the steering wheel in the collision and was rendered unconscious for several hours. He escaped with a severe shaking up and superficial bruises.

DR. F. A. BALDWIN of St. Louis has accepted the position of assistant professor of bacteriology and director of the Public Health Laboratory at the Missouri State University. Dr. Baldwin was city bacteriologist at St. Louis for four years. He assumed his new duties at the state university on September 1.

DR. S. V. BEDFORD of Jefferson City, Councilor of the 19th District, has received a commission as captain in the Medical Corps of the Army and reported for duty at Camp Custer, Michigan. Captain Bedford was tendered a complimentary dinner by the physicians in Jefferson City on August 20 and presented with a handsome wrist watch.

LIEUTENANT H. S. CRAWFORD of Harrisonville has been promoted to captain. He is now regimental surgeon of the 57th Field Artillery, Camp Bowie, Texas. Captain Crawford was Councilor of the 15th District, and during his absence Dr. L. J. Schofield is acting councilor. Captain Crawford writes that there has been very little sickness in his regiment.

THE government needs every scrap of platinum not in essential use. It is thought that a considerable amount of this metal, now employed in the construction of various surgical and dental instruments could be replaced by other metals and especially in instruments that have been discarded. A letter from the War Industries Board in this issue invites the cooperation of physicians and dentists in this important conservation plan.

Press dispatches state that Dr. J. F. Binnie of Kansas City, major in the Medical Reserve Corps, U. S. Army, in command of Base Hospital Unit No. 28, now in France, has been appointed consulting surgeon of the Third Army Corps, commanded by Major-General Joseph E. Dickman. The corps consists of 270,000 men. It was not stated what rank the promotion carries. The members of the hospital unit tendered Major Binnie a farewell dinner on August 21 "somewhere in France."

"FEMALE WEAKNESS CURES," one of the numerous pamphlets published by the Propaganda Department of the American Medical Association, exposes the fallacies of many nostrums sold to the public as so-called remedies for women's complaints. Every physician should have this pamphlet on his desk so he can tell his women patients the truth concerning such frauds and fakes and encourage them to send for a copy. The price is 15 cents.

THE Grand Central Palace in New York City has been leased by the government for use as a surgical reconstruction hospital for the period of the war and three months after, at an annual rental of \$395,000 and maintenance. It will be remodeled to accommodate 3,000 patients. It is estimated that the building will be ready for occupancy by December 1. The building is twelve stories in height, of fire-proof construction, and is 200 by 275 feet in area. It is now used for various exhibitions and as a permanent headquarters for several hundred firms.

THE fall meeting of the Southwest Missouri Medical Society at Hollister on the White River will be held on October 17-18. This is to be one of the most interesting meetings ever held and will combine pleasure with business on this occasion. Members are urged to bring the lady folks. There will be plenty of amusement for them and the wives of those members who are now in the service are especially invited to attend. The beautiful Taneycomo Club has been promised as a meeting place. This was the Maine Building at the St. Louis World's Fair and will accommodate everyone present. Arrangements are being made for an excursion down Lake Taneycomo to the big dam. The trip will be made in the afternoon of the first day and at some point on the lake a big fish fry has been promised.

THE following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Heyden Chemical Works: Silver Proteinate-Heyden.

E. R. Squibb and Sons: Chloramine-T, Squibb; Chloramine-T, Surgical Paste, Squibb; Chloramine-T, Tablet-Squibb, 4.6 grains; Dichloramine-T, Squibb.

Abbott Laboratories: Parresined Lace Mesh Surgical Dressing, Abbott; Phenylcinchoninic Acid-Abbott.

Cutter Laboratory: Antipneumococcic Serum, Type I.

Mead Johnson & Co.: Mead's Dextri-Maltose, No. 2; Mead's Dextri-Maltose, No. 3.

H. K. Mulford Co.: Antipneumococcic Serum, Type I; Antipneumococcic Serum, Polyvalent.

Boston University announces that its medical department, hitherto conducted as a homeopathic school, has been thoroughly reorganized and henceforth will be non-sectarian in scope and character. Eminent physicians of the "regular" school will conduct courses in pharmacology and therapeutics and clinical teaching will be given in the Boston City Hospital and the Robert Bent Brigham Hospital. Homeo-

pathic materia medica will be taught as heretofore, with clinical teaching in the Massachusetts Homeopathic Hospital and allied institutions. The spirit of the times is to do away with sectarianism in things scientific, the announcement reads, and in accord with this spirit, this school states that in 1918 its curriculum has been made as broad and inclusive as is consistent with the medical science of the day.

THE campaign for the Fourth Liberty Loan begins September 28 and closes October 19. While the amount has not yet been announced, it is generally conceded it will be for a larger amount than any of the preceding loans. The American people, therefore, are called upon to raise a larger sum of money in a shorter length of time than ever before. There is need, therefore, for prompt action—prompt and efficient work and prompt and liberal subscriptions.

We have a great inspiration for a great effort. The news from the battle front inspires every American heart, not only with pride and patriotism, but with a great incentive to do his or her part. There is no shirking, no shifting of the individual burden, no selfishness by American soldiers in France; there should be none here. We are both supporting the same country and the same cause—our Army in one way, ourselves in another. Theirs is the harder part, but at least we can do our part as promptly and loyally and efficiently as they do theirs.

Two Navy base hospital units are being recruited in St. Louis, one of them in charge of Dr. L. C. McAmis, director, with the rank of lieutenant-commander. The other members of the staff are Dr. J. C. Salter, internist, lieutenant-commander; Dr. Sherwood Moore, roentgenologist, passed assistant surgeon; Richard C. Smith of Superior, Wis., eye, ear, nose and throat specialist, passed assistant surgeon. Fifteen nurses will be attached to the unit in charge of Miss Grace Lieurance, head nurse.

The other unit is being recruited by Dr. R. B. H. Gradwohl, director with the rank of lieutenant-commander. The others on the staff are Dr. E. H. Johnson, chief surgeon, with the rank of lieutenant-commander; Dr. E. P. North, oculist, passed assistant surgeon, and Dr. Gray Briggs, passed assistant surgeon; Dr. Tom Taylor, chief of the laboratory service, passed assistant surgeon. Fifteen nurses will be attached to the unit in charge of Miss Genevieve Thorpe, head nurse.

HAVING estimated that there are "sixty million weak or crippled" eyes in the country, *Physical Culture* mails a pamphlet to these unfortunates and offers them a year's subscription to "the most vital and personally helpful magazine published" and a course in "strengthening the eyes," for \$4.50 cash or \$5 partial payment plan. Naturally, such an appeal must have some sort of medical indorsement to give it weight, and in this case we find the name of William H. Bates, M.D., presumably of New York City. Opticians are invited to assist in fattening the circulation lists of the magazine by taking the "agency" and buy the course in quantities at a "liberal discount," then teach their patrons how to discard their glasses through "eye exercises." The great harm done by all such scheme lies of course in lulling the people into a false security while conditions that are progressive grow serious and perhaps irremediable.

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AERIAL ambulances for transporting injured flyers is the latest development at the aviation schools, if the commandant of Scott Flying Field, near Belleville, Ill., has been correctly quoted in the newspapers. Certainly such use of aeroplanes is possible and would be the means of quickly relieving the suffering of flyers injured at a distance from the field and often save their lives. It is planned to equip the areoplane ambulances with a stretcher where now a seat for the passenger is built. The injured man can be strapped to the stretcher and carried quickly to the hospital. Flight surgeons are being trained to operate aeroplanes so that they can fly to the injured aviators, dress their injuries and bring them to the post hospital in the aeroplane. It is said that the plan was tested at Scott Field recently by Capt. C. O. Bayless, Flight Surgeon, when he flew to Effingham, Ill., to attend Lieutenant Benner who was piloting a machine that fell while making a landing. Major William R. Ream, of San Diego, Calif., Flight Surgeon of the British-American Flying Circus, from Indianapolis to St. Louis, was killed in this accident.

HAVING found that the "cootie" conveys trench fever, experiments are being continued to ascertain the guilt of the body louse as a carrier of other diseases. The identity of the body louse as the carrier of trench fever was established by American surgeons with the assistance of American soldiers who volunteered to become hosts for the parasites taken from trench fever patients. It was necessary to use human subjects for such experiments because the lower animals proved immune to the disease. The further study of the "cootie" is being conducted at Washington by scientists in the Department of Agriculture and again human subjects have volunteered for a service that will probably result in discoveries of supreme importance to the health and lives of our soldiers.

The department announces that valuable data in regard to the control of the "cootie" have been obtained from the parasites living on the human body, and moving pictures of them have been taken through a microscope. The pictures are to be magnified and shown at army camps before scientists and army officers engaged in delousing work. The entomologists are testing chemicals to learn their destructive action on lice, their effect on human bodies, and their penetration of clothing.

One of the scientists of the Bureau of Entomology is serving as a host for the parasiters. His "cooties" are confined under the glass top of a wristlet, much like a wrist watch, and they pass their existence, from the egg stage to the dead adult, on the skin of his arm, and cannot move to any other spot. Through the glass cover the entomologist can watch the "cooties" as they emerge from their shells and go through all the stages of their life cycle.

Extensive governmental efforts to devise ways of overcoming the parasitic evil are under way. Similar efforts have been made and are being made in practically every country that has large armies in the field. The war centered attention of entomologists upon body lice, which previous to the conflict had not received as much attention as scientists believe they deserve.

MEMBERSHIP CHANGES, SEPTEMBER

NEW MEMBERS

Albright, William E., Pleasant Hope.
 Back, Eli, Cardwell.
 Barnard, Albert L., Steelville.
 Blue, Arthur B., Hannibal.
 Brown, John L., Campbell.
 Carr, Benj. F., Polo.
 Cox, D., Pomona.
 Crowley, Claude C., Richmond.
 Dickson, Walter D., Ulman.
 English, James H., Flat River.
 Ham, Wm. J., Creve Coeur.
 Henderson, George W., Oak Hill.
 Henson, Lafayette L., West Eminence.
 Hodges, T. L., Esther.
 Holmes, Lemuel L., Miller.
 Howerton, David L., Hurdland.
 Isley, Lafayette, Excelsior Springs.
 Jones, C. K., Kingston.
 Lester, Rolla B., Desloge.
 Mace, George R., Iberia.
 Martin, Samuel P., East Prairie.
 McClure, Wm. B., Hale.
 Montgomery, Robert E., Excelsior Springs.
 Noe, Lafayette, Novelty.

O'Connor, William F., Edina.
 O'Malley, William F., Clayton.
 Owen, W. U., Novelty.
 Parker, David A., Cardwell.
 Parker, William G., West Eminence.
 Riggs, John M., Wayland.
 Rodenmeyer, Henry, Kelso.
 Ryan, Dawsey, Bernie.
 Shannon, Charles W., Halifax.
 Smith, James M., Amoret.
 Tarson, Solomon, Leadwood.
 Taylor, Clifford D., Brownington.
 Van Cleave, George T., Malden.
 Walker, Jacob L., Bourbon.

CHANGES OF ADDRESS

Baldwin, Frederick A., St. Louis to Columbia.
 Brunig, F. H., 3223 Maine St., Kansas City, Kan., to 3706 Central Ave., Kansas City, Mo.
 Bullock, E. H., 2508 E. 30th, Kansas City, to 3225 E. 29th.
 Bryant, Carl G., 836 Westover Pl., Kansas City, to 519 Spring, Independence.
 Clitherto, W. H., 600 Carleton Bldg., St. Louis, to 5183 Cates Ave.
 Forsen, J. S., Lincoln, Neb., to McCook, Neb.
 Gallagher, J. C., Valley Park, Mo., to address unknown.
 Gehring, Eugene E., 5463 Delmar Ave., St. Louis, to 3854 Westminster.
 Hendrix, M. E., Caruthersville, Mo., to Memphis, Tenn.
 Hull, A. G., 1105 Rialto Bldg., Kansas City, to 214 E. Armour Blvd.
 Ives, George, Wall Bldg., St. Louis, to University Club Bldg.
 Kessler, E. V., 2425 S. 12th St., St. Joseph, to 2207 S. 14th.
 Patterson, Henry H., Edgerton, to Clarksdale.
 Pipkin, George P., 5520 Wayne Ave., Kansas City, to Georgetown, Colo.
 Pomeroy, Robert L., Warsaw, to Fristoe.
 Potts, James M., 318½ College St., Springfield, to 635 Pickwick.
 Redwine, J. T., Princeton, W. Va., to Cass City, Mich.
 Remley, Arthur R., Lawson to Pattonsburg.
 Remley, George C., Kansas City, Mo., to 2628 Canal St., New Orleans, La.
 Riley, J. B., Toronto, Kan., to Benedict, Kan.
 Rush, George H., Grand Ave. Temple, Kansas City, to 2613 Brooklyn St.
 Sale, Lewellyn, 515 Wall Bldg., St. Louis, to 4463 Westminster Pl.
 Sherwin, C. F., 3931A Shaw Ave., St. Louis, to 5952 Romaine.

Spencer, Selden, 2723 Washington Ave., St. Louis, to 718 University Club Bldg.

Steele, Wallace E., Clinton, to Kansas City, Box 811.

Wiest, Charles A., 3833 College, Kansas City, to Smithton.

Wood, E., 3136 Lafayette Ave., St. Louis, to 5591 Bartmer.

DIED

Caldwell, Thos. A., Lebanon.

Keber, John B., St. Louis.

Loafman, J. E., Bolivar.

Schoor, Albert, Gordon City.

CORRESPONDENCE

UTILIZATION OF PLATINUM IN UN-USED INSTRUMENTS

To the Editor:

1. In view of the limited supply of platinum in the country and of the urgent demand for war purposes, it is requested that every physician and every dentist in the country go carefully over his instruments and pick out EVERY SCRAP OF PLATINUM that is not absolutely essential to his work. These scraps, however small and in whatever condition, should reach governmental sources without delay, through one of two channels:

(a) They can be given to properly accredited representatives of the Red Cross, who will shortly make a canvas for that purpose.

(b) They may be sold to the government through any bank under the supervision of the Federal Reserve Board. Such banks will receive and pay current prices for platinum.

By giving this immediate attention you will definitely aid in the war program.

2. It is recognized that certain dental and surgical instruments requiring platinum are necessary, and from time to time platinum is released for that purpose. It is hoped, however, that every physician and every dentist will use substitutes for platinum for such purposes wherever possible.

3. YOU ARE WARNED against giving your scrap platinum to anyone who calls at your office without full assurance that that individual is authorized to represent the Red Cross in the matter.

F. F. SIMPSON,

Lieut.-Col. M. C. N. A.,
Chief of Section of Medical Industry.

CELEBRATING THE FOURTH OF JULY AND THE FOURTEENTH OF JULY IN FRANCE

In the Field, France,
July 31, 1918.

My Dear Dr. Goodwin:

I wonder if you would be interested in hearing how we celebrated our own Fourth of July and France's Fourteenth? They were impressive days to us. We began the festivities of the Fourth with a regimental review by a Canadian Major-General and our own Brigadier. The Canadian commander decorated five of our numbers for gallantry during the trying days of the last part of March. While we were not in the line, we were working under unusually hazardous and wearing conditions.

In a short talk, the Major-General referred to the long, hard struggle of the American colonies for independence, and the many ups and downs of the struggle before their aims were attained. He said that history had since vindicated the colonies, so that now Great Britain is proud to be joined with the United States in this huge struggle for the same principles which had estranged us in years gone by.

This threatened to be the sanest and quietest Fourth of our lives, so to introduce some noise and excitement, three of us, including a doctor from the Lakeside Unit, drove to a point where the Australians and Americans had just put on a successful show. There we had noise "aplenty," with field batteries spitting forth flame and shell all about us, while occasionally a shell came screaming over from the enemy lines, bursting with a roar, and sending up a geyser of dirt and debris. But we returned without untoward incident.

It was not until a few days later that I had the privilege of visiting the Australian front line trenches and watching the "flying pigs" as they soared from our batteries up to the clouds where they gracefully turned and swooped down into the enemy lines. What a rumpus they did make when they exploded!

Towards evening of the Fourth the people of the nearest village descended upon our camp in a body, headed by the mayor and the council. After a speech of good will and fellowship, schoolgirls presents a large bouquet of roses. Someone also gave us a tablecloth and napkins for the officers' mess. These had been made in this very town from American cotton, and were properly considered an appropriate symbol of the community of interests existing between the two nations as well as an evidence of their cordial relationships. To add a touch of realism, we were bombed during this reception, but it was a huge stars and stripes-bedecked French bombing plane that swooped down low over our heads and dropped a bouquet in our midst.

The members of the battalian staff were taken to dinner by the French officers of another town. We found them most pleasant companions, thoroughly earnest and sincere in their devotion to their beloved France. They wanted to express their gratitude to America for coming to the aid of harassed France. We told them as we have told others, that we do not feel that there is anything unselfish in our cooperation. Rather, France has protected us as well as herself during the awful few years that preceded our appearance in the field. And just as soon as our nation realized how vitally this war affected us and the principles upon which our country is founded, we were proud to fight not only for but with France. The universal courtesy and good will shown us by our Allies touched us more than we could say.

On July Fourteenth we found ourselves seriously handicapped by lack of facilities to provide adequate expression of regard, but we did our best. The battalion marched to the nearest town and formed in front of the "Marie," flanked by detachments of British and Italian troops. The mayor and councilmen then appeared, bearing aloft the tricolor while a class of schoolgirls, ranged beside them, carried the flags of the various Allied nations. We had borrowed the regimental bugle band for the occasion, and it now played "To the Colors," while the command rendered the appropriate honors. We then circled the square and passed before the colors at "eyes left," the bugles playing some real American marches in the meantime.

That afternoon the French commandant and the ladies of the town invited the Allied officers in the vicinity to tea. I found myself seated next to an Italian captain, while English, French, Canadians, Australians and Americans were ranged about the table.

This past month has shown us as never before the close relationship existing between the Allies. We may differ with them on minor points and methods, but we are one with them on principles and purpose. The splendid cooperation on all the fighting fronts has served to emphasize the unity not only of command but of purpose. Then the magnificent manner in which our American troops have acquitted themselves wherever engaged is a source of the utmost enthusiasm and encouragement to all our Allies as well as of keenest satisfaction to ourselves. One hears nothing but the loudest praise and appreciation from French and British alike whenever the work of our troops is mentioned.

Our regiment of engineers served with the British for a year. It has been a year of varied experiences. While we welcomed the order which brought us down to our countrymen, we leave our English friends with a deep feeling of

appreciation for the kindly manner in which they received us and treated us, and with the sincerest admiration for their dogged endurance and valor. With them we were honored guests, but there will be no such distinction for us hereafter. We shall simply take our humble place alongside our hardworking countrymen and enter upon our second year in the war zone with high hopes and ambitions for successful service.

Hope I have not wearied you with this chronicle of events. The profession at home has many new problems to meet and surely are handling them in a splendid manner. At present the most distressing thing with which Major Crossen and I have to wrestle is the sanitary ideal of the average French village. I can assure you that it makes one gasp. We are begging for tent or hut camps, which will be far more pleasant for all concerned.

Sincere regards to our professional colleagues and friends.

Cordially yours,
CAPT. THEODORE P. BROOKES, M.R.C.

MISCELLANY

WAR DEPARTMENT ACCEPTS HOSPITAL AT COOPERSTOWN

The War Department authorizes the following:

The War Department has accepted the offer of Edward Severin Clark of Cooperstown, N. Y., to use the Mary Imogene Bassett Hospital and Pathological Laboratory at Cooperstown, for the period of the war and one year after. It will become a general hospital where special attention will be given to nervous conditions among aviators.

READY EARLY NEXT YEAR

The hospital, which is now being erected, will be ready for use early in 1919. It is a stone building of fireproof construction, and consists of one main building and wards with accommodations for 185 patients, isolation pavilion and power house, nurses' home, pathological laboratory, garage, and employees' dormitory, all situated in a large tract of ground.

Mr. Clark's only stipulation as to the use of the hospital and grounds was that the Government should not intentionally bring in any patients suffering from contagious diseases and that the property should be returned in as good condition as when taken, making allowances for ordinary wear and tear.

One hundred beds and full equipment necessary for caring for that number of patients will be provided by Mr. Clark. The balance of the equipment is to be furnished by the Government.

HOTEL IN TEMPORARY USE

In the event that the hospital is finished before the other buildings are ready, Mr. Clark has placed at the disposal of the Government a small hotel, to be used till the buildings are ready. He has also agreed to furnish all officers and enlisted men the use of the gymnasium and bathing floats, the village library and club, the Otesage golf course and tennis courts as long as the hospital remains under Government control.

GERMANY WATCHING AMERICANS PREPARE

Dispatches from Germany coming by way of London report that the German government is preparing to launch a war loan at about the same time the American Fourth Liberty Loan will open September 28. There is much uneasiness in Germany over the financial situation of the Central Powers and tremendous efforts will be made to make the German loan a success in order to improve conditions there.

Neutral observers say that the German government is anxiously watching the preparations for the Fourth Loan and that Hun officials are predicting its failure. Reports from this country of hot winds and drouth have led the Huns to believe that the very heart of America, the great Middle West, is discouraged over the war situation and crop conditions. Berlin believes that the Southwest is in the same condition.

However, Germany has often been misled by the reports received from this country. Berlin, the Kaiser and the whole imperial group are about to suffer another sickening disappointment. When the news that America has again oversubscribed the Fourth Loan reaches Berlin the military autocrats will have to think out some other excuse to offer.—*The Liberty Bell*.

TO PHYSICIANS OF AMERICA

Surgeon-General Gorgas has called for 1,000 graduate nurses a week—8,000 by October 1.

Twenty-five thousand graduate nurses must be in war service by January 1; in the Army Nurse Corps, in the Navy Nurse Corps, in the U. S. Public Health Service, in Red Cross war nursing.

This involves withdrawal of many nurses from civilian practice and necessitates strict economy in the use of all who remain in the communities.

You can help get these nurses for our sick and wounded men by:

Bringing this need to the attention of nurses.

Relieving nurses where possible wholly or in part from office duty.

Seeing to it that nurses are employed only in cases requiring skilled attendance.

Insisting that nurses be released as soon as need for their professional service is ended.

Seeing that your patients use hospitals instead of monopolizing the entire time of a single nurse.

Encouraging people to employ public health nurses.

Instructing women in the care of the sick.

Inducing high school and college graduates to enter the Army School of Nursing or some other recognized training school for nurses.

Encouraging nurses to go to the front involves real personal sacrifice and added work on the part of the physicians whose duty it is to maintain the health of our civilian second line defense—

But the men who are fighting for their country in France need the nurses.

Department of Nursing,
American Red Cross,
Washington, D. C.

COMMISSIONS ACCEPTED IN THE MEDICAL RESERVE CORPS OF THE ARMY AND THE NAVAL RESERVE FORCE BY PHYSICIANS IN MISSOURI FROM AUG. 17 TO SEPT. 14, INCLUSIVE

Ambrose, O. A., St. Louis.

Baepler, H. L., St. Louis; Baird, J. E. Excelsior Springs; Barker, F. C., Kansas City (Navy); Billeter, W. J., Bynumville; Boehm, J. D., St. Louis; Boogher, Frank, St. Louis; Boteler, G. M., St. Joseph; Bragg,

G. G., Huntsville; Briggs, G. C., St. Louis (Navy); Burst, E. A., St. Louis; Byler, W. F., Kansas City. Capell, C. S., Kansas City; Chamberlain, O. M. C., Rockport; Creveling, H. C., St. Louis.

Deppe, A. H., St. Louis (Navy); Drisdell, T. J., Dadeville.

Edwards, J. M., Fairfield; Elkins, H. A., Hardin; Elliott, J. R., Clarksdale.

Forgrave, L. P., St. Joseph; Froelich, E. J., St. Louis.

Gerstenkorn, R. E., Kansas City; Gradwohl, R. B. H., St. Louis (Navy); Gundlach, A., St. Louis; Guy, R. J., Paynesville.

Harris, R. J., St. Louis; Harris, R. C., St. Louis; Harrison, J. F., Mexico; Herchenroeder, L. C. St. Louis; Hertel, A. L., St. Louis; Hite, H. A., Greenridge.

Jansen, R. W., St. Louis; Jennings, R. J., Windsor; Johansen, F. A., Kahoka; Johnson, E. H., St. Louis (Navy); Johnston, E. L., Waverly; Jolly, J. F., Mexico.

King, W. R., Joplin; Kowalsky, E., St. Louis.

Ludwig, E., St. Joseph (Navy); Lux, P., Kansas City; Lyttle, G. C., St. Louis.

Mabee, J. R., Huntsville; Magee, C. P., Hartsburg; Major, R. H., Kansas City; Margulis, A. A., St. Louis; Mathias, E. L., Kansas City; McCall, O. S., Rocky Comfort; Meanwell, W. E., Columbia; Mellies, G. A., St. Louis; Miller, G. H., St. Louis; Miller, L. B., Kansas City; Milligan, R. H., Kearney; Moore, R. D., Clayton; Morey, O. T., Salisbury; Mulach, A. A., St. Louis; Musgrave, J. E., Excelsior Springs; Myers, J. L., Kansas City.

Nixon, J. W., Kansas City.

Okell, O. C., Excelsior Springs; Ottman, J. C., Craig; Outland, J. H., Kansas City; Oxford, S. E., Poplar Bluff.

Paulette, A. W., King City; Peden, S. E., St. Louis; Porterfield, J. D., Cape Girardeau; Potter, A. E., Ebenezer; Powers, Everett, Carthage; Price, J. T., Mount Moriah; Pryor, H. D., Ashland.

Rider, E. B., Kansas City; Ringen, A. H., Sweet Springs; Rogers, C. H., St. Louis; Rotter, J. C., St. Louis; Royer, D. J., Joplin; Russell, J. M., Monett.

Sauer, W. E., St. Louis; Schuck, Phillip, St. Louis; Shaw, J. W., St. Louis; Spencer, F. H., St. Joseph; Stadler, S. A., Kansas City; Sullivan, F. J., St. Louis; Swahlen, P. H., St. Louis.

Taylor, T. W., St. Louis (Navy); Trader, C. B., Sedalia; Turley, J. G., Desloge.

Van Allen, J. P., Cole Camp; Van Cleave, J. D., Malden.

Walker, W. E., LaMonte; Weiss, W., St. Louis; Wilson, E. H. G., Cape Girardeau; Wyatt, T. E., Kansas City.

Yahlem, N. N., St. Louis; Young, A. O., St. Louis.

Zeinert, O. B., St. Louis.

CHECKING THE SENSES

Bear in mind that each of you, the field commander of your own life's warfare, lives in a dugout. You are helpless except for your lines of communication, your senses. Guard them as a most precious possession. Train them to do their work well; watch them; suspect them. Send your eyes to spy on your ears. Bring up smell to reinforce vision. Suspect the message and send the messenger back again to examine, and again to reexamine, until you are sure the news is true; sure that the valvular sound is such and no other; sure that the reflex is absent; sure that the urine contains albumin; sure beyond a doubt of the thousand items of sense information that come to your headquarters and are needed in your business—the warfare on disease.—E. P. Lyon, *Texas State Journal of Medicine*.

THE DAILY PRESS AND THE "FUTILITIES OF CONTEMPORARY SCIENCE"

The American public has so long been accustomed to accept the daily press as its mentor in all things which concern human welfare that the pronouncements of its printed columns are sometimes given an undeserved consideration. However sound and enlightening the almost infinite variety of items published in the newspapers may be as a rule, however convincing and worthy the editorial notices may appear when they analyze the current problems of politics, economics, finance or literature, it not infrequently happens that the reputation of science suffers. Our great metropolitan dailies attempt to secure experts in the domain of so-called "humanistic" studies to guide them in public expression of policies or achievements. All too often science is treated as something apart from the worthier interests of the thinking public; and as a consequence the presentation of scientific achievement often occurs in a crude way that makes errors of statement glaring to the intelligent, or else degrades reports of scientific progress by the employment of ignorant facetiousness.

An illustration of the editorial preaching of reckless misinformation regarding the development of typhoid germs in horses and the consequent alleged danger of eating horse meat—a statement emanating from Hearst papers under the editorship of Arthur Brisbane—was referred to recently in *The Journal*.¹ Under the caption "Futilities of Contemporary Science," a newspaper of no less dignity than the *New York Times*² attempts to exploit in semijocular vein the press dispatches regarding investigations of Hindhede of Copenhagen on restricted diets. This student of nutrition, who has long advocated economy in diet and particularly in the use of animal protein, has lately shown that adults could live without apparent detriment for a period of more than one and one-half years on a ration of bread, potato, vegetables and fruits without added fats. Such experiments, among many others that might be cited, help to rob the vision of meatless days and beefless weeks of the terror which it inspires in the breasts of the uninitiated. Man's health and strength are not dependent on the assumed superior virtues of animal flesh as a dietary constituent.

Every physician with scientific training is aware of the uncertainty existing with respect to the precise rôle of fat in the economy. Aside from the fact that fats yield more than twice as much energy per unit of substance as other foodstuffs, the demonstration that animal fats often act as carriers of vitamins essential to physiologic welfare has begun to raise new questions as to the indispensability of this group of nutrients. In the current discussions of war edema, the xerophthalmia of babies fed on fat-free milk and cereals, and other diseases of dietary deficiency origin, the possible need of fats as such or what they may

include has become prominent.³ It has been repeatedly reported by competent observers that the low fat ration in Germany, at least in the earlier period of the war, was regarded as one of the most severe deprivations of the population.

Surely, then, reputable investigations of nutrition successfully accomplished in spite of a dearth of fats are likely to command attention in the scientific world. The presumable potency of potato protein, the possible occurrence of adequate vitamins in the green vegetables—these and other timely topics are involved in Hindhede's announcement in his Danish report, of which a brief summary has been transmitted by cable. Yet the *New York Times*, evidently ignorant of the real significance of its "news," indulges in the following supposedly humorous animadversion:

"How painful, then, it is to read that a distinguished Scandinavian, Dr. Hindhede, has established the fact that man can get fat without eating fats! Those misguided individuals who want to know how to get fat are few, and material for the gratification of their strange desire is ready to the hand of most of them. That men could continue to live, work, think, and maintain at least a minimum of health with very little fat in their diet was already established, for in vast regions of half-fed Europe they have been doing that for months and years past; no Scandinavian researches were needed to establish that.

"If Dr. Hindhede and his colleagues among neutral scientists wish to devise something that will bring real solace to the world after the war is over, let them devise some diet on which anybody can get thin. The mere verification of suspicion that whatever you eat or do not eat you will still have to let out your belt, may prevent some needlessly painful dietetic penances, but it does nothing to alleviate the agonies of the adipose."

Where ignorance is bliss 'tis folly to be wise. But it is worse than folly to allow ignorance to concoct belittling facetiousness at the expense of the efforts of modern science—particularly in a day when science admittedly needs to be encouraged to its utmost.—*Jour. Am. Med. Assn.*

THE osteopaths are charging that the regular medical profession is boycotting the osteopaths from military service because Surgeon-General Gorgas has ruled that osteopathic physicians will not be given commissions in the Medical Reserve Corps unless such osteopaths possess a degree as doctor of medicine. In the name of common sense why should not the osteopaths be boycotted—if that is what they want to call it—from being given commissions when they possess such a one-sided view of all that enters into the successful care of the sick and wounded soldiers? Any man who presumes to care for sick and wounded soldiers should have a broad and comprehensive knowledge of all the recognized branches and surgery. When he has that knowledge he will employ osteopathy, chiropractic, mental science or any other mode or scheme of treatment that in his judgment, based on education and experience, tells him will bring about the desired result.

We cannot, however, subject our soldier boys to the warped and one-sided views of members of pseudo-medical cults who have not acquainted themselves with all of the recognized and established methods of diagnosis and treatment.—*Journal of the Indiana State Medical Association.*

1. The Intermediate Host of the Typhoid Bacillus, Current Comment, *The Journal A. M. A.*, July 27, 1918, p. 284.

2. Futilities of Contemporary Science, Editorial, *New York Times*, July 29, 1918.

3. Steenbock, H.: Vitamins and Nutrition, *The Scientific Monthly*, August, 1918, 7, 179.

STUDENT ARMY TRAINING CORPS PLAN EXPLAINED BY OFFICIAL

Press interview by the Third Assistant Secretary of War, Sept. 5, 1918:

I think that the Students Army Training Corps plan is now going along in good shape. The technical difficulty about the whole thing was that it got jammed for the reason that we could not anticipate action by Congress; but the college business, as I know from experience, is a seasonal business, like a summer boarding house—you have to make your plans before a certain date in order to start by a certain date. We had to do a certain amount of guessing and we had to do a certain amount of keeping the institutions guessing, but now I think the thing is perfectly clear.

The colleges will go on as separate organizations. The college does not turn over its identity to the War Department. It goes on. It has its board of trustees, it has its funds—everything else. The department makes a contract with the college to train a number of men who are soldiers primarily and students merely because they are ordered to be students.

In order to get going by October 1, those people who will be normally at every college, the boys over 18 who are in physical health who would be there anyway at that time, will be retained; but a boy who is in college on that basis isn't going to have a prescriptive right to stay on there under the old happy-go-lucky college conditions, and if he doesn't come through he will find himself in a training camp like any other drafted man.

Testing Students Out

I think there is no impropriety in saying that in this way we are simply testing those fellows out, and it is the intention of the committee to draw constantly on the enlisted men in the camps who are showing promise, who show that they would be a better investment; for instance, if you were in a camp and Dougherty was in a college and Dougherty was not thought to be standing high enough in his work and you were showing promise, you might find yourselves exchanged.

Each college has its entrance requirements, which are normally four years of high school, and while, of course, any college can change its requirements, I do not think that they are planning to do so. As you know, machinery similar to that above outlined has been worked out for enabling a boy who has not had a high school education to go to a technical institution for work which will prepare him to be a technician of some sort.

We will take as many men as the colleges can provide for. We will not, of course, approve of a college that cannot bed and board the men as we want them to.

We propose to draw from the camps the very kind of boy you have in mind if he has promise, and preliminary education, and is making good in camp. If we can do better for the Government by sending him to a college, and using the college equipment, we will send him to college. We can take him out at any time. The period from October 1 to December 31 will probably be one of adjustment. The classification machinery is very complete, and we will know from it the men in the camps who have the necessary preliminary education.

This plan, of course, will be carried out only at colleges which have a military officer. Our construction program is going to be pressed to make provision for all the men who have to be trained under the new legislation; and, as a matter of fact, it is cheaper to send a boy to college and train him there than it is to send a boy to a cantonment and give him the course of training there.

As I say, this is a seasonal trade, and we have got to get started, and the plan, as I understand it, is to make a tentative contract now, based on what the colleges think they can do, and what we think we can do, to be

superseded by a permanent contract which will be practically uniform. Of course, it cannot be exactly so. A college in Vermont will have a coal bill that they will have to consider that a college in Texas will not. We have tried to study the matter out, and our belief is, owing to the fact that a college has its buildings, etc., and is a going concern, that we can make a contract that will cost the Government less than to give the corresponding training in a cantonment.

Not Class Segregation

As to teachers, in some cases we can enlist the instructors to hold onto them; but what you men are now trying to do is to get a detailed plan in advance of something that we will have to feel our way to.

In discussing it, the most important thing is to make it clear to the people of the country that this is not intended to be in any way a class segregation. It isn't the nice boy who is going to get off easily. The need of the Government is to test its men out for leadership as quickly as possible, and we simply want to use existing institutions of the country for that purpose. It is part of the mobilizing of the entire organization of the country to meet the given need; the boy who is inducted belongs to the Army; it can do anything it pleases with him, but it is a better plan to put a boy who has had a high school education where we can train him for responsibilities.

Four Things May Happen

There are four things which may happen to the man who has been or will be picked out to attend the colleges: (1) He may be sent to a central officers' training camp; (2) he may be told to continue his college training, because he is promising enough but he isn't quite mature enough for an officers' camp; (3) some few of these boys may be held on at the colleges for some special subject where we need specialized training, like chemistry. The total number of these is not going to be serious. It is more likely that fellows with a certain dexterity will be assigned to special schools as draftmen, or something of that kind—not, of course, because they are engineers and have completed the preliminary mathematical training for engineering, but fellows who can do engineering jobs, or drafting jobs; (4) men who have had their chance and have failed to make good, and who go right into a draft camp like any other registered boy of 18.

SOME FACTS ABOUT YEAST

The following is an abstract of some articles that have recently appeared concerning the therapeutic value of compressed yeast (Fleischmann's). It is the first time compressed yeast was used in such experiments. The article should stimulate the study and trial of this form of yeast in the treatment of the conditions mentioned as having been favorably influenced by it:

The subject of yeast is of importance because, first, as has been pointed out in an editorial article in *The Journal of the American Medical Association* (1916, lxiv, 1390), it possesses a distinct nutritive value, and because, secondly, it possesses therapeutic qualities. The matter of yeast treatment has recently received impetus as the result of the publication in *The Journal of the American Medical Association* (Oct. 13, 1917) of an article by Dr. Philip B. Hawk and collaborators, which represents work done in the Laboratory of Physiological Chemistry of the Jefferson Medical College, and the Philadelphia General Hospital, both of Philadelphia, and the Roosevelt Hospital, New York.

Hawk and his colleagues obtained strikingly good results from the use of yeast in many pathologic

conditions, especially the purulent skin conditions such as acne and furunculosis and in constipation. That they did so is not at all surprising, for yeast has always acted well in these skin conditions, as is well known. Hawk mentions that yeast has been used in medicine since the days of Hippocrates (who used it in the treatment of leucorrhœa); not, however, until the middle of the nineteenth century, was its use looked on favorably by the medical profession. Since then, its value has been attested by numerous observers, who have employed it in a variety of pathologic conditions. Its value in certain skin conditions has been freely acknowledged by dermatologists—for instance, Schamberg has seen good results from its use in the treatment of ordinary furunculosis (*Diseases of the Skin and the Eruptive Fevers*, 1915) although it failed him in the furunculosis accompanying small-pox.

Hawk's researches are novel in that he employed as a therapeutic agent not the time-honored brewers' yeast, but the familiar Fleischmann's yeast of the bakeries and the household. This is the first time, it seems, that bakers' yeast has been employed systematically as a therapeutic agent, although Louvel (*Remes med.*, 1905-6, — fasc. 10, 16-19) seems to have used it in the treatment of sundry infectious diseases, and according to Cailliau (*Thèse de Paris*, 1908) it was used in 1896 by De Backer, who mixed it with equal parts by weight of white honey, and who, having used it thus in the treatment of furunculosis, considered that it was more active and better supported than ordinary yeast.

That brewers' yeast should have been used in the past is not surprising when we call to mind that, in all probability, in modern times at least, it was extensively used and tested by the employees of breweries, who found it readily accessible. A special virtue seems to have attached to brewers' yeast, probably from this reason. For instance, the yeast specified by Schamberg (*loc. cit.*) is fresh brewers' yeast, and the U. S. Pharmacopœia of 1876 defines yeast (*fermentum*) as "a peculiar insoluble product of the fermentation of malt liquors." It was dropped from the Pharmacopœia of 1880, and has since remained unofficial. The U. S. Dispensatory (Remington and Wood) of 1918, describes it as a "flocculent, frothy, somewhat viscid semi-fluid of a dirty yellowish color, a sour vinous odor and a bitter taste." Suffice it to say, the appearance of brewers' yeast is not at all familiar to very many physicians, one reason being that it is not immediately available, except in some large cities. In country districts that are remote from breweries, the use of brewers' yeast is attended with serious difficulties.

Compressed yeast, the undried product, is readily obtained and there is no reason why it should not be largely used.

The National Formulary, 1916, under the term "*Cerevisiæ Fermentum Compressum*" recognizes compressed yeast and describes it as follows: "The moist, living cells of *Saccharomyces cerevisiæ* Meyen (*Fam. Saccharomycetaceæ*) or of other species of *Saccharomyces*, combined with a starchy or absorbent base. White or yellowish-white, soft, and easily broken masses, having a characteristic slightly sour odor, and not more than a faintly acid reaction to litmus. When examined under the microscope, numerous oidium and mycoderma cells and starch grains are visible. Compressed yeast must not be used unless fresh, and free from mildew and musty odors." Sadtler (*Industrial Organic Chemistry*, 1900) has also given a good description of compressed yeast: "It should be only slightly moist, not sloppy to the touch; the color should be a creamy white; when broken it should show a fine fracture; when placed on the tongue it should melt readily in the mouth. It should

have an odor of apples, not like that of cheese; neither should it have an acid taste or odor."

There is a difference of opinion concerning the nature of the constituent of the yeast which gives it therapeutic value. Some investigators claim a direct bactericidal effect, others regard such effect as due to by-products of fermentation such as alcohol and various acids, still others regard the action as due to the chemotactic influence of the high nucleic content of the yeast. According to the Dispensatory, the experiments of Walzou and Sacharow have shown that yeast increased the opsonic index of dogs for staphylococci and streptococci. This may help to explain its favorable action in infectious conditions.

The Dispensatory mentions the fact that the ordinary yeast cake of American bakers may well be substituted for brewers' yeast. In view of Hawk's investigations this statement may very well be true. Compressed yeast is generally to be preferred because of the fact that it is carefully standardized and a uniform product is always obtainable. Sadtler refers to the researches of Hansen—who early separated various species of yeasts used in the industries. Among these varieties of *Saccharomyces*, *Cerevisial* and *Saccharomyces Pastorinus* were used in the brewing of beer; *saccharomyces ellipsoides* in the manufacture of wine. Sadtler states that it is prepared as compressed yeast in cakes, generally with the addition of potato-starch. The National Formulary does permit the presence of species of *saccharomycetaceæ* other than *Saccharomyces cerevisiæ* Meyen. At all events, the composition of bakers' yeast can be controlled, and this yeast possesses the advantages of availability and uniformity.

A CHANCE—WITH A RUNNING START

By JUDGE JULIAN W. MACK

Men who go forth to battle, though in no sense cowards, are not without fear. But it is not, except in the rarest cases, a fear of bodily injury that possesses them; the real source of anxiety is that their families may suffer, or become objects of charity.

The brilliancy of our expeditionary forces in action, their impatience to carry on against the common enemy is an inspiring evidence of the American soldier's dash and courage when the liberty of his country is at stake. Once he has entered the military establishment he is eager for battle.

But the fitness and bravery of our soldier or sailor are predicated on his peace of mind. Unless he is free from a nagging sense of responsibility, unless he feels assured of the independence of the family he left behind—his wife, his children, his mother—he cannot serve with the spirit that has always pervaded our arms. The security of their dependents is as vital to the morale of our military forces as is the physical condition of the men.

And so when the government, by the passage of the War Risk Insurance Bill, provided in generous measure for the support of the fighter's family, it performed a duty as obvious as the cause for which the country is giving its men, its money, and its resources. This Act, complex to the layman in some of its technical phases, is simply an instrument whereby the government aims to dispel the one fear of its fighting men: that their families are going to be dependent on others while they are away. Through it his government assures the soldier and sailor that, while it may not be possible in every case to replace the individual combatant in precisely the same situation he occupied before his country called him, yet at any rate his family, as well as himself, will be saved from a humiliating dependence on others for the necessities of life.

In many instances, I believe, the returned soldier, although physically handicapped will find his way back to industrial and social life, intellectually and financially stronger than when he left it. The country has unlimited confidence in the ability and resourcefulness of the Surgeon-General and his department to give every aid and comfort to the wounded and disabled, and to restore them as nearly as is humanly possible to a normal physical and economic condition. The Federal Board for Vocational Education, in reeducating those who must be taught new vocations; the Bureau of War Risk Insurance carrying out the provisions of the Act; the American Red Cross on constant watch over the families at home—these and other competent organizations in all parts of the United States constitute a bulwark of protection and comfort to our fighters, whose importance cannot be overestimated.

IN SERVICE AND AFTER

In the framing of this Act, the question of stiffening the morale of our men was uppermost. Congress, in enacting the bill, exercised great vision, not only by providing for allotments and allowances to the families of men *while in the service* but for the after-care of our wounded through war insurance and compensation. So closely knit is the relationship between rehabilitation of the disabled and compensation for injuries that the former depends almost entirely on the latter.

By this I mean that the disabled returned soldier, on his discharge from the army, receives a compensation which will ensure, to some degree at least, his independence. If he requires a new vocation, the money the government gives him will help carry him through, will fire his ambition to go ahead and regain his former place in society or a better one. It will stabilize his peace of mind and keep him contented in the thought that his family is being provided for while he is being trained to earn a good living for the future.

It seems unnecessary here to discuss in detail the thousand and one points bearing on compensation that may be brought up from time to time, but there are two facts that I should like to emphasize emphatically. They are these:

Compensation will be paid to the disabled soldier and sailor irrespective of his earning capacity after the war; but it may be suspended if the man unreasonably refuses to fit himself for active civilian life through the vocational opportunities that the government will provide.

The purpose of these measures is to stimulate the disabled man to lift himself from the dead level of the government compensation to the highest economic condition within his powers: to create a healthy discontent with a life that too many injured men sure of the bare needs of existence are led to accept. The country wants its heroes to develop every latent possibility.

This should be given the widest possible publicity. In England and Canada one of the most difficult problems to be overcome at the outset of the war in getting the men to take courses in reeducation was the fear that they would be deprived of their compensation if they learned trades and earned good incomes. "What is the use," they asked, "why should we work?" By vigorous publicity our Allies overcame this misunderstanding and recently have experienced no opposition because of it.

It is interesting to note with what rapidity the new attitude toward the disabled is developing in America. The newspapers and periodicals are preaching the gospel of "Not charity—but a chance," and the people are responding. That is what government compensation and vocational training will give our men—a chance with a running start.

ON FAMILY STATUS

Military and naval compensation is based first on the injury and then on the size of the man's family. If the status of the family changes from month to month or year to year, the amount of the compensation changes with it. For instance, if a soldier or a sailor now a bachelor becomes handicapped, and later, say ten years after, should marry, the amount of his compensation at that time will depend on his status then. It will be increased. And still later, if there are children, it will be further increased. On the other hand, if he is married and has children at the time of his injury, and in the future his wife or children should die, then his compensation will be reduced to that of an unmarried man.

For permanent disability the monthly compensation is paid in the following amounts:

- (a) If he has neither wife nor child living, \$30.
- (b) If he has a wife but no child living, \$45.
- (c) If he has a wife and one child living, \$55.
- (d) If he has a wife and two children living, \$65.
- (e) If he has a wife and three or more children living, \$75.
- (f) If he has no wife but one child living, \$40, with \$10 for each additional child up to two.

Bachelor or married, he receives \$10 a month additional for his widowed mother. If his condition is such that he needs the constant attention of a nurse or attendant, the Bureau of War Risk may allow him up to \$20 a month for that purpose.

\$1,200 A YEAR FOR LIFE

There is another significant provision that is not generally known today. For the loss of both feet, or both hands, or both eyes, or for a condition rendering a single or a family man permanently helpless or bedridden, \$100 a month will be given. In addition to this, of course, he will receive medical and surgical treatment and will be supplied within reason with all special appliances he may need. Many men, thus handicapped, will be able to work and make a good salary, *but whatever they earn the government will still pay them \$1,200 a year for life.*

These are the broad aspects of compensation. The war insurance offering as high as \$10,000, payable, however, only in monthly payments over twenty years or more, will still further fortify compensation, for it covers death and the total permanent disability from injuries received not only in the line of duty but in civil life after the war.

As the "cripple" is passing, so is the "pensioner." He will become as obsolete as the old soldiers' home, and other institutions and practices that world progress is leaving in its wake. In industry there are not pensions but compensations. In the military it will be the same with the added rehabilitation for a new life. *And this addition must soon be extended to all who are handicapped whether in industry or in war: whether through accident or negligence.-- Carry On.*

JASPER COUNTY (MO.) TUBERCULOSIS HOSPITAL

The prevalence of pulmonary tuberculosis occurring among the workmen employed in certain lead and zinc mines in Jasper County known as "sheet ground" mines, led to the formation of the Jasper County Antituberculosis Society, and a campaign of education was inaugurated to try and improve sanitary conditions and, if possible, stamp out the disease.

It was soon discovered that in order to accomplish any work worth while it would be necessary to obtain some effective sanitary laws; accordingly, representative delegates were sent to Jefferson City during the session of the legislature and certain measures were

introduced and became laws of the state, among which is the measure allowing counties of the state to vote bonds to erect and maintain hospitals for the care and treatment of all stages of tuberculosis.

Jasper County was the first county in the state to take advantage of the new law, and upon petition to the County Court an election was ordered and \$100,000 was voted to build a suitable hospital.

Dr. George W. Stock, late of Sea View Hospital, N. Y., has been employed as resident physician and superintendent, and we hope to make this institution a great success; every facility necessary in the most up to date institution has been provided and the commissioners are not restricted politically or otherwise in the management.

This hospital is situated one and one-half miles northwest of Webb City, Mo., on a forty-acre tract of land on a high elevation fronting south. It is designed primarily for advanced cases of tuberculosis with modern and permanent accommodations for incipient tuberculosis and convalescents. The foundation wall is rubble stone, 18 inches thick, faced with pitch face ashlar above the grade line. The superstructure is faced with a dark red vitrified brick backed up with hollow tile with a waterproof mortar joint between the face brick and hollow tile to obviate the dampness following the cement mortar joint to the inside face of the wall. All walls are laid in

vate bedrooms on the first story. The windows in these front bedrooms extending to the floor are "three-run" sash windows, and by raising the two lower sashes even with the bottom of the upper sash, the beds may be rolled out on the veranda.

The wings at each end of the building contain the open-air wards and dressing rooms. Each ward is intended to accommodate sixteen patients and is provided with a common dressing room in which are sixteen private compartments, each containing a steel locker for clothing, toilet articles, etc.; each dressing room also contains two water-closets, one shower, three basins and one dental lavatory.

Each open-air ward is arranged to obviate drafts on the beds without impediments to the free circulation of air. They are also provided with two rooms in which the sick may be cared for without disturbing any of the other patients.

At each end of the building, on each floor, is a utility room provided with a modern bedpan cleaner, pan rack, etc.; a large blanket room furnished with heat to keep blankets warm for immediate use, and a linen room for daily supplies.

On each floor is a diet kitchen served with a dumb-waiter from the main kitchen, and each has, in a separate compartment, a modern sterilizing dish-washer. The food is served the patients directly from each diet kitchen, but the trays and dishes are



Jasper County (Mo.) Tuberculosis Hospital.

Portland cement mortar, damp-proofed. The floors are reinforced concrete, with resilient composition floors in the private rooms, and a smooth cement floor, painted, in the open-air wards. The heating plant and fuel room are enclosed with masonry walls, and the other partitions are of a slow-burning, fire-retarding material. The roof is composition supported on reinforced concrete, and over the roof proper is an extra heavy cap sheet to protect the roofing composition.

The plan of the building is crescent shape, the center axis line being directly north and south. The peculiar shape of the building allows the maximum amount of sunlight in each room. The utility rooms are on the north side of the building.

The main entrance is in the center into a waiting room directly connected with the main office, superintendent's office, and the examination rooms. This large waiting room is also intended to be used for midweek evening meetings. A veranda, 12 feet wide, extends across the central portion with patients' entrances to their respective sitting or reading rooms at each end. On each side of the main entrance the veranda has a cover 40 feet long and 14 feet wide, giving an appearance not unlike a pergola. This cover stands away from the building about 2 feet, and about 2 feet below the top of the front windows, thus admitting an abundance of sunlight to the pri-

returned to the dish-washer room, scraped, washed and sterilized before being returned to the dish-warmer in the diet kitchen. In the rear portion of the building, on the first floor at the west side, are located the examination, nose and throat, laboratory, and operating rooms. On the east side is the head nurse's dining room and sitting room, which is the entrance for all kitchen supplies. The first floor is connected with the second floor with a stairway, but all floors in the main portion are connected with easy inclines from basement to roof.

On the third floor is located the children's open-air ward and classroom, on each side of which are sick rooms, locker rooms and toilet rooms to accommodate sixteen children. Immediately in front of the children's ward, extending the full length of the central portion, is a pergola with a cover to insure shade and shelter. The entire roof may be used by the children for games.

In the basement is the vacuum steam heating plant and high pressure steam boiler for sterilizing purposes and vacuum cleaning apparatus, a complete laundry plant, consisting of two washers and extractor, flat-work ironer, dry room, press and American sterilizer, through which all soiled linen and clothes go before entering the laundry room proper; also a complete refrigerating plant with a capacity of six tons of ice per twenty-four hours, which will make all the ice

required for the ice-cream freezer, packs, etc., but the large cooler and diet kitchen refrigerators will be cooled by coils containing circulating brine; the drinking water will be cooled in the same manner, and a small pump will keep the ice water circulating to each drinking fountain on each floor. A complete kitchen is provided with an 8-foot range, steam cooker and stock kettle, steam and cook's tables, egg cooker, three-battery coffee urn, ice crusher and cream freezer, dish washer, vegetable sinks, etc. In connection with the main kitchen is a bake shop containing an oven, proof box, dough trough, baker's table and sink. A large room is also provided in which to receive and weigh the supplies, groceries and vegetables.

A special and important feature regarding the supplies and kitchen is that all supplies are received and all food is cooked and sent to each diet kitchen; all trays are served and set on the racks, and not until they have passed out of each diet kitchen are they exposed where any tuberculosis inmate has been or is allowed. The dishes are then cleaned and sterilized in the sterilizing apparatus and passed back to the diet kitchen by a different route from that by which they came out.

In the basement at the foot of the incline and just inside the west grade entrance is located an incinerator in which not only all garbage may be consumed, but all sputum cups or boxes may be destroyed.

There is also conveniently located in this department a room into which a bed may be rolled and fumigated. It is also connected with the large vent stack so that the fumes may be quickly carried away.

Close to the side entrance door is the morgue, which is arranged for stretchers and is directly connected with a ventilating flue, and at each end of the main building are two larger rooms with an area of approximately 2,250 square feet, which may be used as recreation or work rooms for patients with incipient tuberculosis. At each end of the building is a nurse's station provided with a telephone in front of which will be the signal pilot light and from which all door signals may be seen; through the plate glass panels in the doors direct supervision of sitting room, dressing room, and open-air wards may be exercised without the nurse leaving the desk. Beds for 117 patients and 21 nurses and help are shown on the plans. If the dining room on the second floor is used as a ward, 6 more patients may be accommodated, making a normal capacity of 123 beds. If the nurses should be housed in a detached building, using the 20 beds shown in the rear, 143 patients could be accommodated.

The building proper, including the heating and high-pressure steam plant, laundry and kitchen equipment, refrigerating plant, cooler and refrigerators, and architect's fees, cost \$85,000. This is approximately 24 cents per cubic foot and \$690 per bed, normal capacity, or \$595 per bed possible capacity.

Under normal conditions of the market, for \$25,000 the capacity may be increased to accommodate 100 more incipient or ambulatory patients, who would, owing to present arrangement and locations of the utility rooms, nurses' station, etc., receive the same accommodations and protection from fire as those in the present building. This would make the cost per bed \$500 normal capacity or \$450 possible capacity.

It is intended, when the number of cottage patients justifies it, to build a large dining room with grade entrance on north or rear end of the present rear portion, thereby affording north and south ventilation, this dining room to be connected with the present kitchen through the basement, leaving the nurses' dining and sitting room as it is at present.

The growing necessity for strictly tuberculosis hospital facilities renders this building of extraordinary importance in supplying many well-thought-out features.

ORDERS TO MISSOURI PHYSICIANS IN THE MEDICAL RESERVE CORPS OF THE ARMY FROM AUGUST 17 TO SEPTEMBER 14, INCLUSIVE

Abney, Lieut. W. L., Blackwater, to Camp Dix, N. J., from Fort Riley.

Abrams, Lieut. S. F., St. Louis, to Fort Riley, for instruction.

Albers, Lieut. E. A., Kansas City, to Fort Riley, for instruction.

Alton, Capt. G. P., Barry, to Fort Sam Houston, Texas, for duty, from Fort Riley.

Ambrose, Capt. O. A., St. Louis, to Fort Oglethorpe, for instruction.

Armstrong, Lieut. J. H., Kirkwood, Camp McArthur, Waco, Texas.

Baepler, Lieut. H. L., St. Louis, from duty as a private, to Camp Pike, Ark.

Black, Lieut. G. C., St. Louis, to Millington, Tenn., Park Field, from Fort Oglethorpe.

Blackmore, Capt. T. A., Windsor, to Fort Riley, for instruction.

Blakemore, Lieut. J. M., St. Louis, to Camp Crane, Pa., from Camp Bowie.

Benham, Lieut. C. E., Tarkio, to Fort Riley, for instruction.

Boehm, Lieut. J. D., Monett, to Fort Oglethorpe, for instruction.

Boyd, Capt. J. W., Sarcoxie, to Fort Riley.

Bradley, Capt. E. H., Springfield, to Fort Oglethorpe, for instruction.

Bradshaw, Lieut. J. O., Lebanon, to Fort Riley, for instruction.

Bragg, Lieut. G. G., Huntsville, to Fort Oglethorpe, for instruction.

Brashear, Lieut. H. C., St. Louis, to Camp Beauregard, Alexandria, La., for duty, from Camp Travis.

Briskey, Lieut. P. A., St. Louis, to Fort Oglethorpe, for instruction.

Brown, Lieut. W. K., St. Louis, to Camp Shelby, Miss., from Camp Devens.

Bryan, Capt. H., Carthage, order to Fort Riley, for instruction, revoked.

Bryan, Capt. H., Carthage, to Fort Riley, for instruction.

Burns, Major Robert, Jr., St. Louis, to Camp Meade, Md., from Fort McHenry.

Burst, Lieut. E. A., St. Louis, to Fort Riley, for instruction.

Butzke, Lieut. E. J., Bowling Green, to Waynesville, N. C., from New Haven.

Calhoun, Capt. J. G., St. Louis, to Fort Des Moines, Iowa, base hospital, from Fort Riley.

Calvert, Lieut. H. A., Smithville, to Camp Lewis, American Lake, Wash., base hospital.

Cantrell, Capt. C. D., Kansas City, order to report to Fort Oglethorpe for instruction has been revoked.

Carpenter, Lieut. G. W., Utica, to Fort Riley, for instruction.

Cary, Capt. W. E., Kansas City, to Whipple Barracks, Ariz., from Camp McArthur.

Casey, Lieut. E. B. M., St. Louis, to Camp Wadsworth, Spartanburg, S. C., to examine the command for nervous and mental diseases.

Cater, Lieut. R. M., Marceline, to Camp Sevier, Greenville, S. C., base hospital.

Chamberlain, Lieut. O. M. C., Rockport, to Fort Riley, for instruction.

Chapman, Lieut. T. E., Joplin, to Fort Sill, Okla., base hospital.

Coats, Lieut. C. C., Winston, to Wichita Falls, Tex., from Camp Dick.

- Cook, Capt. E. F., St. Joseph, to Fort Constitution, N. M., for duty, from Camp Dodge.
- Cooley, Capt. E. L., St. Louis, to Hoboken, N. J., from Fort Sheridan.
- Coombs, Lieut. M. O., Joplin, to Camp Gordon, Ga., as tuberculosis examiner, from Fort Thomas.
- Coon, Capt. E. H., Grand Pass, to New Haven, Conn., Yale Army Laboratory School, for instruction.
- Counsell, Lieut. C. M., Kansas City, to Camp Dix, N. J., from Fort Riley.
- Craven, Capt. Y. D., Excelsior Springs, to Camp Dix, N. J., base hospital.
- Dahms, Lieut. G., St. Louis, to Camp Logan, Fort Sam Houston, Tex., base hospital, from Camp Travis.
- Daley, Lieut. L. M., Hamilton, to Fort Riley, for instruction.
- Dallwig, Lieut. E. L., St. Louis, to Fort Oglethorpe, for instruction.
- Davis, Lieut. F. L., St. Louis, to Fort Oglethorpe, for instruction.
- Dean, Capt. J. M., St. Louis, to Camp Zachary Taylor, Louisville, Ky., base hospital.
- DeHoney, Lieut. F. R., Fredericktown, to report to the commanding general, Central Department, for assignment to duty.
- Deweese, Lieut. E. R., Kansas City, to Fort Oglethorpe, base hospital, from New York.
- Dodson, Capt. J. F., Kirksville, to report to the commanding general, Central Department.
- Drisdell, Lieut. T. J., Dadeville, to Fort Riley, for instruction.
- Ebeling, Lieut. A. W., Warrenton, to Camp Greene, N. C., from Fort Oglethorpe.
- Eber, Lieut. C. T., St. Louis, to Fort Riley, for instruction.
- Edmondson, Lieut. M. T., Fair Grove, to Fort Riley, for instruction.
- Emerson, Lieut. B. H., Stockton, to Camp Pike, Little Rock, Ark., for duty, from Fort Riley.
- Epstein, Capt. J. M., St. Louis, to Camp Wadsworth, S. C., from Camp Dodge.
- Ferguson, Lieut. J. D., Ava, to Fort Riley, for instruction.
- Ferris, Lieut. D. P., St. Louis, to Hoboken, N. J., from Camp Jackson.
- Finley, Capt. F. L., East Prairie, to Fort Riley, for instruction.
- Fogle, Capt. R. L., Otterville, to Fort Riley, for instruction.
- Forgrave, Lieut. L. P., St. Joseph, to Camp Logan, Houston, Tex., base hospital.
- Ganaway, Capt. A. M., Albany, honorably discharged.
- Gibbs, Lieut. C. A., Greensburg, to Camp Cody, N. M.
- Goldberg, Lieut. D. L., St. Louis, to Fort Riley, for instruction.
- Grace, Capt. J. F., Excelsior Springs, to Fort Riley, for instruction.
- Green, Capt. J. R., Independence, to Fort Oglethorpe, for instruction.
- Gregg, Lieut. A. M., Joplin, to Fort Oglethorpe, for instruction.
- Gronoway, Lieut. T. P., Bevier, to Camp Pike, Ark., from Fort Riley.
- Gross, Capt. J. H., Webster Groves, to base hospital, Camp Pike, Ark.
- Gundlach, Capt. A., St. Louis, to Fort Riley, for instruction.
- Haas, Lieut. F. F., St. Louis, to Camp Hancock, Augusta, Ga., base hospital, from Fort Oglethorpe.
- Hamel, Capt. A. H., St. Louis, to report to commanding general, Central Department, for assignment to duty.
- Harrington, Lieut. G. L., Independence, to Camp Crane, Allentown, Pa., for temporary duty, from Camp Fremont.
- Harris, Capt. I. J., St. Louis, to base hospital, Camp Sherman, Ohio.
- Harris, Capt. R. C., St. Louis, to Fort Oglethorpe, for instruction.
- Harrison, Capt. J. F., Mexico, to Fort Riley, for instruction.
- Hawkins, Lieut. G. W., Salisbury, to Camp Sheridan, Ala.
- Haynes, Lieut. F. W., St. Louis, to Fort Oglethorpe, for instruction.
- Hendricks, Lieut. H., St. Louis, to Fort Sam Houston, Tex.
- Hertel, Lieut. A. L., St. Louis, to Camp Shelby, Hattiesburg, Miss., base hospital.
- Hess, Lieut. H. L., Kansas City, revoke order to Camp Sherman, Ohio, from Indianapolis.
- Hoberecht, Capt. C. A., St. Louis, to Fort Riley, for instruction.
- Hoefler, Lieut. E. A., Marceline, discharged.
- Homan, Lieut. J. S., St. Louis, to Fort Riley, for instruction.
- Horst, Capt. O. C., Springfield, to Fort Oglethorpe, for instruction.
- Hudson, Lieut. C. B., Montgomery City, to Camp Dodge, Des Moines, Ia., base hospital, from Cape May.
- Hurford, Capt. P. G., St. Louis, to New Haven, Conn., for instruction, from Army Medical School.
- Jacobs, Capt. M. W., St. Louis, to Camp Sheridan, Montgomery, Ala., base hospital.
- James, Lieut. E. D., Joplin, to Fort Riley, for instruction.
- James, Lieut. F., Sheldon, to Camp Meade, Admiral, Md., with the board examining the troops for tuberculosis.
- James, Capt. R. M., Joplin, to Jackson Barracks, La.
- Jeude, Capt. Julius J., St. Louis, to Fort Riley, for instruction.
- Johansen, Lieut. F. A., Kahoka, to Fort Oglethorpe, for instruction.
- Jolley, Lieut. J. F., Mexico, to Camp Beauregard, La., base hospital.
- Jones, Capt. W. G., Lincoln, to Fort Riley, for instruction.
- Joseph, Capt. D. T., St. Louis, to Washington, D. C., for duty in the Surgeon-General's Office, from Waco.
- Kelly, Capt. B. B., Purdy, to Fort Riley, for instruction.
- Kelley, Lieut. R. R., Savannah, to Fort Riley for instruction.
- Kenney, Capt. W. L., St. Joseph, honorably discharged on account of physical disability existing prior to entrance into the service.
- King, Lieut. W. R., Joplin, to Fort Riley for instruction.
- Knabb, Lieut. A. D., Springfield, to Camp McArthur, Texas.
- Knox, Capt. A. C., Independence, to Fort Riley, for instruction.
- Kowalsky, Lieut. E., St. Louis, to Camp Dix, N. J., base hospital.
- Leighton, Major W. E., St. Louis, to Newport News, Va., from Camp Crane.
- Lewis, Capt. L. C., Kansas City, to Fort Oglethorpe, for instruction.
- Lichtenberg, Capt. J. S., Kansas City, to Fort Oglethorpe, for instruction.
- Link, Capt. E. X., St. Louis, revoke order to Camp Devens, Mass., from Orono, Me.
- Lionberger, Lieut. J. R., St. Louis, to Camp Bowie, Texas, base hospital.
- Ludwick, Capt. A. L., Kansas City, to Mineola, Long Island, N. Y., Hazellhurst Field, from Camp Dick.

Lund, Capt. Herluf G., St. Louis, to Fort Sill, Okla., base hospital.

Lux, Lieut. P., Kansas City, to Fort Riley, for instruction.

Lyttle, Lieut. G. C., St. Louis, to Camp Shelby, Miss., base hospital.

McCartney, Lieut. O. P., Kansas City, to Fort Riley, for instruction.

McCarty, Lieut. E. D., St. Louis, to Camp Sherman, Chillicothe, Ohio, base hospital, from Camp Gordon.

McCubbin, Lieut. J. B., Fulton, to Camp Lee, Petersburg, Va., base hospital.

MacDonald, Capt. J. W., Clayton, to Camp Pike, Ark., base hospital.

McDonald, Capt. J. G., Urich, to Fort Riley, for instruction.

McIntire, Lieut. J. C., St. Louis, to Camp McArthur, Tex.

McKeehan, Lieut. L. P., Kansas City, to Fort Riley, for instruction.

McLennan, Capt. T. A., Marshall, to report to the Commanding General, Central Department.

McNary, Capt. W. F., St. Louis, to Fort Oglethorpe, for instruction.

McPherson, Lieut. O. P., Kansas City, to base hospital, Fort Sill, Okla., from Camp Zachary Taylor.

Mabee, Capt. J. R., Huntsville, to Fort Riley, for instruction.

Major, Capt. H. S., Fulton, to Camp Pike, Ark., to examine the command for nervous and mental diseases.

Malone, Lieut. J. T., St. Louis, to Fort Oglethorpe, for instruction.

Manning, Capt. D. F., Marshall, to report to the commanding general, Central Department.

Marder, Lieut. J. L., St. Louis, to New Haven, Conn., for duty.

Marder, Lieut. J. L., St. Louis, to Syracuse, N. Y., as tuberculosis examiner, from New Haven.

Mathias, Capt. E. L., Kansas City, to Fort Riley, for instruction.

Maxwell, Lieut. H. S., Hopkins, to base hospital, Camp Sherman, Ohio, from Camp Zachary Taylor.

Meanwell, Capt. W. E., Columbia, to Fort Oglethorpe, for instruction.

Megee, Lieut. C. P., Hartsburg, to report to the Commanding General, Central Department.

Menefee, Lieut. C. D., Perry, to Camp Bowie, Fort Worth, Tex., base hospital, from Fort Oglethorpe.

Meyers, Capt. J. L., Kansas City, to Fort Oglethorpe, for instruction.

Meyer, Lieut. W. F., St. Louis, to Fort Riley, for instruction.

Middleton Capt. J., Kansas City, to Fort Riley, for instruction.

Miller, Capt. H. B., St. Louis, to Fort Riley, for instruction.

Mitchell, Capt. G. B., Branson, to Fort Riley, for instruction.

Morgan, Capt. E. L., Graham, to report to the Commanding General, Central Department.

Montgomery, Lieut. J. G., Kansas City, to Fort Oglethorpe, for duty, from Fort Riley.

Moore, Capt. R. D., Clayton, to Fort Riley.

Morey, Lieut. O. T., Salisbury, to Fort Riley, for instruction.

Musgrove, Capt. J. E., Excelsior Springs, to Fort Riley, for instruction.

Nickell, Capt. L. O., Macon, to Fort Oglethorpe, for duty, from New York.

O'Keefe, Capt. J. J., St. Louis, to Fort Riley, for instruction.

O'Kell, Capt. O. C., Excelsior Springs, to report to the Commanding General, Central Department, for assignment to duty.

O'Kelley, Capt. F. M., Sikeston, to Manhattan, Kan., State Agricultural College, to examine and give medical attention to drafted men.

Opie, Major E. L., St. Louis, to Fort Riley, from Camp Cody.

Orr, Lieut. C. A., Mendon, to Fort Riley, for instruction.

Owens, Lieut. J. L., Kansas City, to Camp McArthur, Waco, Tex., base hospital.

Paugh, Capt. P. G., St. Louis, to Azalea, N. C., for duty, from New Haven.

Paul, Capt. T. M., St. Joseph, to Newport News, Va., for duty.

Peacock, Lieut. K. C., St. Louis, to Camp Sherman, Ohio, as orthopedic surgeon, from Fort Oglethorpe.

Peden, Lieut. S. E., St. Louis, to Fort Riley.

Peters, Capt. M. L., Cameron, to Fort Riley, for instruction.

Pickett, Lieut. C. P., Mercer, to Fort Riley, for instruction.

Pierce, Lieut. D., Newark, to Fort Riley, for instruction.

Pinion, Lieut. J. R., Caruthersville, to Fort Riley, for instruction.

Platt, Lieut. R. B., Kansas City, to Camp Pike, Little Rock, Ark., for duty, from Camp Travis.

Powers, Capt. E., Carthage, to Camp Dodge, Iowa.

Price, Capt. C. C., Kansas City, to Fort Riley, for instruction.

Price, Lieut. J. T., Mt. Moriah, to Fort Riley, for instruction.

Randle, Lieut. H. T., University City, to Fort Riley, for instruction.

Reynolds, Capt. S. D., Gower, to report to the Commanding General, Central Department, for assignment to duty.

Rice, Lieut. G. W., Kansas City, honorably discharged on account of physical disability incurred in line of duty.

Ringen, Lieut. A. H., Sweet Springs, to Camp Dodge, Iowa.

Rodebaugh, Lieut. G. C., Springfield, to New Haven, Conn., for instruction, from Yale Army Laboratory School.

Rowlett, Capt. H. S., Maryville, to Camp Custer, Mich., base hospital, from Fort Riley.

Royer, Lieut. D. J., Joplin, to Fort Oglethorpe, for instruction.

Schmalhorst, Capt. D. E., St. Louis, to Fort Oglethorpe, as instructor, from Fort Riley.

Schuch, Capt. P., St. Louis, to Fort Riley, for instruction.

Schuck, Capt. Albert, St. Louis, to Fort Riley, for instruction.

Scott, Lieut. E. A., St. Louis, to Camp Beauregard, La., base hospital, from Fort Oglethorpe.

Seibert, Lieut. D. A., Washington, to Fort Riley, for instruction.

Senseny, Capt. E. T., St. Louis, to Camp Grant, Rockford, Ill., base hospital.

Settle, Lieut. F. S., St. Louis, to Fort Riley, for instruction.

Sewell, Lieut. M. F., Kansas City, to Camp Beauregard, La., base hospital, from Fort Oglethorpe.

Sharpe, Capt. N. W., St. Louis, to Sacramento, Calif., Mather Field, for duty, from Portland.

Sharpe, Capt. N. W., St. Louis, to Fort Worth, Texas, from Sacramento.

Shaw, Major F. W., Mt. Vernon, to Camp Perry, Ohio, for duty, from Fort Leavenworth.

Sheetz, Lieut. R., Orrick, to Camp Logan, Tex., as tuberculosis examiner, from Camp Pike.

Shelton, Capt. W. A., Kansas City, to Fort Oglethorpe, for instruction.

Short, Lieut. U. S., St. Louis, to Camp Jackson, Columbia, S. C., base hospital.

Smart, Capt. R. W., Crane, to Fort Riley, for instruction.

Smith, Capt. A. S. J., St. Joseph, to Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Camp Pike.

Smith, Lieut. G. W., Kansas City, to Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Fort Riley.

Sparhawk, Lieut. W. J., St. Louis, to Fort Oglethorpe, for instruction.

Spencer, Capt. F. H., St. Joseph, to base hospital, Fort Sam Houston, Texas.

Stadler, Lieut. S. A., Kansas City, to Camp Sheridan, Ala.

Stewart, Lieut. S. S., St. Louis, to Fort Riley, for instruction.

Stewart, Lieut. S. S., St. Louis, to New Orleans, Tulane University, to examine and give medical attention to drafted men, from Fort Riley.

Stokes, Lieut. J. B., St. Louis, to Fort Riley, for instruction.

Stokes, Lieut. J. B., St. Louis, order to report to Fort Riley for instruction has been revoked.

Sullivan, Capt. F. J., St. Louis, to Camp Bowie, Texas, base hospital.

Swahlen, Capt. P. H., St. Louis, to Camp Pike, Little Rock, Ark., base hospital.

Swarts, Lieut. J. L., St. Louis, to Camp Dodge, Des Moines, Iowa, base hospital.

Tarr, Lieut. G. H., Poplar Bluff, honorably discharged on account of physical disability existing prior to entrance into the service.

Thomas, Lieut. H. S., Kansas City, to Camp Shelby, Hattiesburg, Miss., with the board examining the troops for tuberculosis, from New Haven.

Thompson, Lieut. D. A., St. Louis, to Camp Dix, N. J., base hospital.

Tilles, Capt. R. S., St. Louis, to Fort Oglethorpe, for instruction.

Toomey, Lieut. T. N., St. Louis, to Ann Arbor, Mich., State Psychopathic Hospital for intensive training, from Camp Pike.

Trader, Capt. C. B., Sedalia, to Fort Riley.

Tucker, Lieut. C. A., Springfield to Fort Riley, for instruction.

Turley, Lieut. J. G., Desloge, to Fort Riley, for instruction.

Underwood, Capt. M. L., St. Joseph, to Camp Pike, Little Rock, Ark., to examine the command for nervous and mental diseases.

Upshaw, O. T., St. Louis, to Fort Riley, for instruction.

Van Allen, Capt. J. P., Cole Camp, to Fort Riley, for instruction.

Van Cleve, Lieut. J. D., Malden, to base hospital, Camp Pike, Ark.

Vaughan, Lieut. J. R., St. Louis, to Cape May, N. J., for temporary duty, from Camp Colt.

Vaughn, Capt. S. E., Hurricane, to Yale Army Laboratory School, New Haven, Conn., for instruction.

Vernon, Lieut. W. C., Kansas City, to Fort Oglethorpe, for duty.

Wainwright, Capt. A. G., St. Louis, to Camp Logan, Tex., as tuberculosis examiner, from Camp Pike.

Wallace, Lieut. H. K., St. Joseph, to Camp Meade, Admiral, Md., base hospital, from Fort McHenry.

Wehr, Lieut. C., Kansas City, to Fort Riley, for instruction.

Wenermann, Lieut. S. F., St. Louis, to Hoboken, N. J., for duty, from New York.

Werth, Capt. D. S., Kirkwood, to Camp McArthur, Texas.

West, Lieut. W. E., Trenton, to Camp Bowie, Fort Worth, Tex., base hospital, from Fort Sill.

West, Capt. W. M., Monett, to base hospital, Fort Sam Houston, Tex.

Westerman, Lieut. C. M., St. Louis, to Camp Dix, Wrightstown, N. J., for duty, from Hoboken.

Westlake, Capt. S. B., St. Louis, to Camp Sherman, Chillicothe, Ohio, base hospital.

Willis, Lieut. J. B., Pattonsburg, to Fort Riley, for instruction.

Wyatt, Capt. T. E., Kansas City, to Camp Pike, Ark., base hospital, from Fort Riley.

Young, Lieut. J. H., Ozark, to Fort Riley, for instruction.

Zienert, Lieut. O. B., St. Louis, to Neurological Institute, New York, for instruction.

Zeinert, Lieut. O. B., St. Louis, to Fort Oglethorpe, evacuation hospital, from New York.

Zoglin, Lieut. N., Kansas City, to Fort Sam Houston, Tex.

COMMISSION OFFERED AND ORDERED TO DUTY ON ACCEPTANCE, SEPTEMBER 14

Alder, Lieut. A. E., Cane Hill, to Fort Riley, for instruction.

Allen, Lieut. C. H., Odessa, to Fort Riley, for instruction.

Barnum, Lieut. K. R., Sedalia, to Fort Oglethorpe, for instruction.

Deal, Lieut. F. E., Slater, to Fort Riley, for instruction.

Hartmann, Capt. J. A., St. Louis, to Fort Oglethorpe, for instruction.

Hartwell, Lieut. B. O., Maysville, to Fort Riley, for instruction.

Hunt, Lieut. W. J., St. Joseph, to New Haven, Conn., Yale Army Laboratory School, for instruction.

Hurwitz, Lieut. L., Joplin, to Fort Riley, for instruction.

Kieffer, Capt. V. B., St. Louis, to Fort Oglethorpe, for instruction.

Lamson Capt. R. C., Neosho, to Fort Riley, for instruction.

Miller, Capt. H. B., St. Louis, to Fort Oglethorpe, for instruction.

Minton, Capt. W. H., St. Joseph, to Camp Sevier, S. C., base hospital.

Monday, Lieut. L. R., Richland, to Fort Oglethorpe, for instruction.

Murphy, Capt. J. C., St. Louis, to Fort Oglethorpe, for instruction.

Orr, Capt. T. G., Kansas City, to Fort Oglethorpe, for instruction.

Poe, Lieut. J. D., St. Louis, to Fort Oglethorpe, for instruction.

Bowers, Lieut. J. S., Granby, to Fort Riley, for instruction.

Rehfeldt, Capt. C. S., St. Louis, to Fort Oglethorpe, for instruction.

Savage, Capt. H. G., Warsaw, to Fort Oglethorpe, for instruction.

Shaefer, Lieut. W. R., Columbia, to Fort Riley, for instruction.

Tate, Capt. P. S., Farmington, to Fort Riley, for instruction.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR
ALL THEIR MEMBERS)

Taney County Medical Society, Nov. 17, 1917.
Webster County Medical Society, Nov. 21, 1917.
Wright County Medical Society, Dec. 3, 1917.
Schuyler County Medical Society, Dec. 4, 1917.
Platte County Medical Society, Dec. 5, 1917.
Madison County Medical Society, Dec. 17, 1917.
Livingston County Medical Society, Dec. 19, 1917.
Ste. Genevieve County Medical Society, Dec. 22,
1917.
Benton County Medical Society, Dec. 24, 1917.
Adair County Medical Society, Dec. 27, 1917.
Carter-Shannon County Medical Society, Jan. 9,
1918.
Chariton County Medical Society, Jan. 11, 1918.
Holt County Medical Society, Jan. 21, 1918.
St. Clair County Medical Society, Jan. 21, 1918.
Barton County Medical Society, Jan. 22, 1918.
Henry County Medical Society, Jan. 24, 1918.
Moniteau County Medical Society, Jan. 28, 1918.
Camden County Medical Society, Feb. 1, 1918.
Scott County Medical Society, Feb. 2, 1918.
Cedar County Medical Society, Feb. 8, 1918.
Clark County Medical Society, Feb. 8, 1918.
Cooper County Medical Society, Feb. 13, 1918.
Atchison County Medical Society, Feb. 18, 1918.
Ralls County Medical Society, March 10, 1918.
Pulaski County Medical Society, March 11, 1918.
Pemiscot County Medical Society, March 25, 1918.
Cape Girardeau County Medical Society, March
28, 1918.
Vernon County Medical Society, March 28, 1918.
Putnam County Medical Society, April 11, 1918.
Cass County Medical Society, April 13, 1918.
Laclede County Medical Society, April 15, 1918.
Clay County Medical Society, May 2, 1918.
Newton County Medical Society, May 2, 1918.
Jefferson County Medical Society, May 8, 1918.
Pettis County Medical Society, May 11, 1918.
Johnson County Medical Society, May 31, 1918.
Macon County Medical Society, June 24, 1918.
Gentry County Medical Society, July 11, 1918.
Davies County Medical Society, July 15, 1918.
Laclede County Medical Society, Aug. 9, 1918.
Marion County Medical Society, Sept. 9, 1918.

CARTER-SHANNON COUNTY MEDICAL SOCIETY

The Carter-Shannon County Medical Society met in the offices of Dr. Alexander Johnston at Winona, August 26, and after listening to a very interesting report of surgical cases (gallstones and goiter) with specimens, by Dr. W. G. Parker of West Eminence, the following business was transacted: Dr. William Garfield Parker and Dr. Lafayette Leonard Henson were elected to membership.

It was ordered that the dues be increased sufficiently to provide necessary funds to pay the annual dues of all members called to government service during the war, without expense to them.

It was carried by unanimous vote that the society favors the Owen-Dyer Bill.

The amendment proposed by the Medical Section of the Council of National Defense for qualifications for membership on and after Nov. 1, 1918, was adopted.

The meeting was well attended and was interesting.
FRANK HYDE, M.D., President.
T. W. COTTON, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society, representing the profession in one of the oldest county societies of Missouri, is 100 per cent. American.

Every man within the confines of Clay County is either with the colors or enlisting, or in the Volunteer Medical Service Corps. Among our commissioned men I mention Drs. J. E. Musgrave, Andrew Grace, O. C. O'Kell, Y. D. Craven, G. P. Alton, E. C. Hill, J. F. Grace, A. Kirkman, J. E. Baird, Burton Maltby and G. R. Dagg. The two latter are in France. Drs. E. L. Parker, W. E. Keith and T. N. Bogart are enlisting. A letter from Dr. R. J. Woods at Smithville states his desire to enlist. As I am writing this from memory and "off-hand," I may inadvertently report wrong or omit some name which should be there.

We have thought best not to keep up our regular scientific meetings during this time of much war work. But I am writing this to say that the Clay County Medical Society is wide awake and alert for the best things for our homes and fellowmen, with America always first.

Dr. E. E. Peterson of Nashua and Dr. R. H. Milligan of Kearney are two of our much-needed men in their respective communities, but it is very doubtful if they can be content with mere practice of medicine when the whole World Democracy is being born.

The humble secretary is frosting gradually on the summit and the years have added great equatorial dimensions, but he has so loved America that his only son is in Fort Dodge, Iowa, with a gripful of the spirit of his Dad.

J. J. GAINES, M.D., Secretary.

DUNKLIN COUNTY MEDICAL SOCIETY

The Dunklin County Medical Society met Tuesday evening, September 3, at the office of Dr. W. L. Gossage, in Kennett, with the following doctors in attendance:

Drs. Hughes, Tipton, Buckley, Martin and Russell of Senath; Drs. Back and Parker, Cardwell; Drs. Dalton and Van Cleve, Malden; Drs. Hammersley, Kesling, John Brown and Charley Brown, Campbell; Dr. White, Arbyrd; Dr. Bonewits, Hollywood; Drs. Baldwin, Finney and Gossage, Kennett; Burdette, Paulding.

There were two clinical cases reported by Dr. Charley Brown, and freely discussed by the members. Dr. Finney reported a very interesting case, which was discussed by several members. A very rare case was reported by Dr. Burdette in which much interest was shown and which was thoroughly discussed by all present.

Four doctors were voted into the society, these being: Drs. A. D. Parker and Eli Black of Cardwell; Charley Brown of Campbell, and G. T. VanCleve of Malde.

After all business was attended to, the subject of the Voluteer Medical Reserve Corps was taken up. The Dunklin county doctors are 100 per cent. strong for this branch of service. There are fifty-three physicians in Dunklin county, including the fourteen who are already in service, and Dr. G. O. Hammersley, who is looking for his commission at an early date. Some of the members are already on the front in France.
W. L. GOSSAGE, M.D., Secretary.

MILLER COUNTY MEDICAL SOCIETY

The Miller County Medical Society held a meeting at Tusculumbia, September 3. There was a good attendance, and Drs. W. D. Dickson of Uman and George R. Mace of Iberia were elected members. The society adopted the resolution requiring all members to express their willingness to serve the country and indorsed the Volunteer Medical Service Corps.

G. D. WALKER, M.D., Secretary.

PUTNAM COUNTY MEDICAL SOCIETY

Putnam County Medical Society held a meeting in the office of Dr. J. H. Holman in Unionville on August 31, with the president, Dr. Holman, in the chair. Present: Drs. Holman, E. A. Montgomery, Gray, St. John (honorary) Nulton, Vores.

Dr. C. P. Vores was elected secretary to fill the vacancy caused by Dr. Carryer removing from the state.

It was moved by Dr. Gray and seconded by Dr. Nulton that the following resolution be adopted:

WHEREAS, The patriotism of the members who volunteer their services in the present emergency is appreciated, be it

Resolved, That all due diligence be used by the members of this Society in safeguarding their interests during their absence from home; that 33½ per cent. of the net receipts received from their former patients be forwarded to their representatives at home, and that for a year after their return to active home practice every endeavor be made to return intact to them their former clientele.

On motion of Dr. Nulton, seconded by Dr. Vores, the request of the Council of National Defense that all physicians enroll for such immediate service as may be required of them was indorsed, and the request of the Missouri State Committee that future and present membership in the County and State Medical Society be governed by the three sections of the circular, was also approved.

All members present signed a blank attached to questionnaire as the regular were not forms received.

This resolution was adopted unanimously.

The next meeting was set for some time in September, the date being left to the president and the program to the secretary. There being no further business the Society adjourned.

C. P. VORES, M.D., Secretary.

SCOTT COUNTY MEDICAL SOCIETY

The Scott County Medical Society held a special meeting called for the purpose of voting on applications of membership. Dr. Henry Rodenmeyer of Kelso was elected a member. Dr. Rodenmeyer has applied for a commission in the Medical Reserve Corps.

J. A. CLINE, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The St. Louis County Medical Society met at Webster Groves, Sept. 11, 1918. In the absence of the president, the meeting was called to order by Vice President Pritchard at 3 p. m. Present: Drs. Westrup, Miles, Meisch, Will, Martin, Brossard, Dunnivant, Townsend, Conway, Pritchard, Jones, Knabb, Sutter. The minutes of the last meeting were read and approved.

The board of censors reported on the following applicants for membership: Drs. W. J. Ham, Creve Couer; F. O'Malley, Clayton; Frank Sandfos, Ballwin; Charles Zuppman, Ballwin; Moses Leon, Clayton; H. Grosby, St. Louis. On motion, duly carried, the following were elected to membership: Drs. Ham,

O'Malley, Sandfos and Zuppman. Dr. Grosby was rejected.

A communication was received from the Auxiliary Medical Defense Committee of St. Louis County stating that it had been asked by the State Committee to contribute the sum of \$1 monthly for the payment of the expenses of the State Committee for the duration of the war, and asked the society as its financial sponsor to make a pledge to that effect. On motion, duly carried, such pledge was made, and the treasurer instructed to remit to the State Committee the sum of \$4 to pay in advance for the remaining four months of the year 1918.

It appearing that two members of the board of censors, namely, Drs. Roy D. Moore and C. L. Armstrong, are absent in United States service, a motion was carried authorizing the president to fill the unexpired terms until the next regular election by the appointment of two members to act in their stead. The following were appointed: Drs. Garnett Jones of Maplewood and R. B. Denny of Creve Couer.

Dr. Jones gave a very interesting talk on the treatment of tuberculosis at Colorado Springs as observed by him on a recent visit there.

Dr. Westrup reported a recent case of placenta praevia occurring in his practice in which the lives of both mother and child were saved by prompt cesarean section. After a general discussion, the society adjourned to its next regular meeting.

A. CONWAY, M.D., Secretary.

WAYNE COUNTY MEDICAL SOCIETY

The Wayne County Medical Society met in the office of Dr. J. P. Price, Williamsville, September 17, with the president, Dr. G. W. Toney, in the chair, and the following members present: Dr. J. F. Price and Dr. R. J. Owens; visitor, Dr. J. P. Sebastian. The application for membership of Dr. J. L. McGhee was voted on and he was elected.

A communication from Dr. George H. Jones of Jefferson City requesting the names and addresses of all physicians in the county was read, and the secretary was directed to comply with his request.

Some reports from practice were made by Dr. G. W. Toney and Dr. J. L. McGhee, and the discussions elicited were interesting.

There appearing no further business, the meeting adjourned to meet at Williamsville the first Tuesday in October, 1918.

R. J. OWENS, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SILVER PROTEINATE-HEYDEN.—Said to be identical with protargol (See New and Nonofficial Remedies, 1918, p. 362). Silver proteinate-Heyden must conform with the tests, and have the properties described under protargol. The Heyden Chemical Works, New York (*Jour. A. M. A.*, Aug 17, 1918, p. 534).

CHLORAMINE-T, SQUIBB.—A brand of chloramine-T which complies with the New and Nonofficial Remedies standards. For a description of the action, uses, dosage and chemical and physical properties of chloramine-T see New and Nonofficial Remedies, 1918, p. 156. E. R. Squibb and Sons, New York.

CHLORAMINE-T SURGICAL PASTE-SQUIBB.—It contains chloramine-T, 1 Gm., in 100 Gm. of a base composed approximately of sodium stearate, 15 per cent., and water, 85 per cent. E. R. Squibb and Sons New York.

CHLORAMINE-T TABLETS-SQUIBB, 4.6 Grains.—Each tablet contains chloramine-T, 4.6 grains. E. R. Squibb and Sons, New York.

DICHLORAMINE-T, SQUIBB.—A brand of dichloramine-T which complies with the New and Nonofficial Remedies standards. For a description of the action, uses, dosage and chemical and physical properties, see New and Nonofficial Remedies, 1918, p. 157. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Aug. 31, 1918, p. 745).

PROPAGANDA FOR REFORM

THE CAUSE OF HAY-FEVER.—In the regions of the United States west of the Rocky Mountains, hay-fever may be produced by an almost entirely different flora from that which causes it in the eastern states and in Europe. This emphasized the need for determining the exact species involved, in each case before treatment for immunity may be undertaken. It has been found that the type of spring hay-fever which is very troublesome in the Sacramento Valley is attributable to a walnut tree pollen (*Jour. A. M. A.*, Aug. 10, 1918, p. 469).

ECKMAN'S CALCERBS.—This is put out by the same concern that exploits Eckman's Alternative, essentially a mixture of alcohol, calcium chlorid and cloves. Calcerbs is not sold openly as a cure for consumption, yet as an appeal to the consumptive the claims made are probably just as alluring and as dangerous as those made in the past for the "Alterative." The A. M. A. Chemical Laboratory reports that Calcerbs is sold in the form of tablets and that these contain about 20 per cent. calcium chlorid. They also contain calcium carbonate, an emodin-bearing laxative drug, such as aloes, sugar and flavoring material. That some physicians have recommended calcium salts in pulmonary tuberculosis, based on the unproved supposition that consumption is due to lime deficiency, is no excuse for a "patent medicine" concern putting out calcium chlorid under thinly veiled claims that will lead the public to infer that the preparations will cure consumption (*Jour. A. M. A.*, Aug. 10, 1918, p. 486).

KATHARMON.—The Council on Pharmacy and Chemistry reports that the Katharmon Chemical Company in advertising its "Katharmon" appeals especially to a profession whose members, if they live up to their ethical code, would not prescribe it. A comparison of the so-called formulas published for Katharmon in the past shows that they have not only varied from time to time but that in no instance was a quantitative statement with regard to all the asserted ingredients given. The A. M. A. Chemical Laboratory reports that Katharmon has an alkaline reaction and therefore cannot contain boric acid, salicylic acid, or "borosalicylic acid," as has been claimed. Katharmon is in conflict with Rules 1 and 4 of the Council on Pharmacy and Chemistry because of its indefinite and secret composition and the method of advertising it indirectly to the public; it is in conflict with Rules 10, 6 and 8 in that it is an irrational shotgun mixture sold under unwarranted therapeutic claims and under a name nondescriptive of its composition (*Jour. A. M. A.*, Aug. 10, 1918, p. 487).

MAMMALA.—This is a dried milk powder and may be considered as a partially skimmed milk dried by a patented process to which lactose (milk sugar) has been added to make up for the deficient food units caused by the partial removal of the cream. Reduced to a basis comparable with cow's milk, 12 per cent.

solids, it appears that protein and ash are normal, the fat low, and the milk sugar high (*Jour. A. M. A.*, Aug. 10, 1918, p. 488).

THE TOXIC EFFECTS OF ARSPHENAMIN.—Recent research suggests that the toxic effects sometimes obtained from the administration of arspenamin may be caused by the use of an inefficient amount of alkali in preparing the arspenamin solution for injection. J. Danysz found that solutions of arspenamin and similar preparations prepared in the usual manner, but with a small amount of calcium biphosphate added, soon precipitated on exposure to air and that these precipitates are readily soluble in sodium hydroxid. His experiments seem to show that a similar precipitation occurs when arspenamin is injected intravenously; that this precipitation is responsible for both the mild and the severe toxic reactions; and that this precipitation is the more likely to occur the smaller the amount of alkali used for preparing the solution. He reports, however, that a hyperalkaline solution, though less toxic when injected into the vein of rabbits than solutions containing less alkali, caused pain and that sometimes the vein became obstructed and later atrophied. Danysz also found that the toxic action of arspenamin solutions was increased when the solutions were injected rapidly. Danysz also advises that small initial (vaccinating) doses should be given to establish tolerance before full doses are administered (*Jour. A. M. A.*, Aug. 17, 1918, pp. 570 and 596).

MAIL ORDER FRAUDS.—A fraud order was issued against the following four concerns after an investigation into the character of their business by the postoffice authorities: Mrs. A. H. Hon, South Bend, Ind., advertising and selling various alleged remedies for the self-treatment of ailments peculiar to women. The Publishers Advertising Agency, Inc., operated by Clarence E. Worthen, Boston, Mass., for the purpose of securing space in newspapers for the advertisement of a large number of proprietary articles sold through drug stores. L. A. Johnson, an ignorant negro, Lake Village, Ark., operating under the names Dr. George D. Williams, Dr. L. A. Johnson, and the Associated Doctors, and offering to cure "anything you were not born with." Last Chance Medicine Co., conducted by a negro, C. Frank Jones, at Birmingham, Ala. (*Jour. A. M. A.*, Aug. 17, 1918, p. 590).

DI-CROTALIN TREATMENT OF EPILEPSY.—Di-crotalin is a rattlesnake venom preparation which has been advertised by the Swan-Myers Co. as a "treatment for epilepsy, chorea, bronchial asthma, chronic or hereditary nervous headache, nervous prostration incident to change of life, hysteria, mania, insomnia, neurasthenia, etc." That any measure of success, sufficient to justify the adoption of the rattlesnake venom treatment for epilepsy has resulted, is not to be concluded from the available reports. Still less evidence is there for the use of rattlesnake venom in the list of conditions given by the Swan-Myers Co. There are a number of good reasons why the cautious physician will shun this treatment and advise against it (*Jour. A. M. A.*, Aug. 17, 1918, p. 592).

LET THE READER KNOW.—In the latest issue of the *American Journal of Syphilis* appears an article by J. Sheridan Baketel, "On the Use of American-Made Salvarsan," which is in effect a puff for Metz' Arspenamin. The reader is informed that Dr. Baketel is Professor of Preventive Medicine and Hygiene and Lecturer on Genito-Urinary Diseases and Syphilis in the Long Island College Hospital; Genito-Urinary Surgeon to the House of Relief of the New York Hospital; Major, Medical Reserve Corps, U. S. Army. The reader is not told, however, that Dr. Baketel is or was until quite recently in the employ of the A. H. Metz Laboratories (the present name of the

Farbwerke Hoechst Co.) and has for some time been the manager of the pharmaceutical department of that concern (*Jour. A. M. A.*, Aug. 24, 1918, p. 664).

IODINIZED EMULSION (SCOTT) AND CREOSOTONIC (SCOTT).—The Council on Pharmacy and Chemistry reports that the label for Iodinized Emulsion (Scott) declares: "Each fluidram contains: Alcohol, m. $4\frac{3}{4}$; Rectified Ol. of Turpentine, m. $3\frac{1}{2}$; Iodin, gr. $\frac{7}{8}$; Phenol, gr. $\frac{1}{2}$; Glycerine and Elixir Lactated Pepsin with Aromatic Oils in the form of a perfect emulsion." The Council declares that Iodinized Emulsion (Scott) is not a "pharmaceutical triumph," as claimed in the advertising, but is an irrational mixture—a reminder of a decadent polypharmacy—sold under misleading and unwarranted claims, and that it is inadmissible to New and Nonofficial Remedies because the composition is not correctly declared; because unwarranted therapeutic claims were made; because the name is not descriptive of its composition, and because the formula is complex and irrational. The Council reports that, according to the label, the following formula is claimed for Creosotonic: Contains in each fluidram: "Alcohol, m. $2\frac{1}{2}$; Creosote and Guaiacol sulphonates of each, gr. 1; Compound Hypophosphites, gr. 1 (including Quinine Hypophosphites, gr. $\frac{1}{36}$ and Strychnine Hypophosphites, gr. $\frac{1}{256}$), with Iodinized Emulsion (Scott) m. 30." The Council concluded that Creosotonic (Scott) was an irrational mixture sold under unwarranted claims and declared it inadmissible to New and Nonofficial Remedies for reasons essentially the same as those given for Iodinized Emulsion (Scott). After the Council's report on the preparations had been sent to the manufacturer, the Dawson Pharmacal Co., the advice was received that the matter criticized by the Council was no longer sent out. As, however, these irrational mixtures were still being sold and advertised, the Council directed publication of its report (*Jour. A. M. A.*, Aug. 24, 1918, p. 680).

A CORRECTION.—In an article "Dependability of Dosage in Tablets" (*Jour. A. M. A.*, July 27, 1918), the Tailby-Nason Company was included with firms one or more products of which had been found deficient by the Connecticut Agricultural Station. In this an injustice was done the Tailby-Nason Company. The Connecticut Experiment Station has issued a statement that no product of this firm was found deficient and that the name of the firm was included through an error (*Jour. A. M. A.*, Aug. 24, 1918, p. 681).

DIPLOSAL AND ACETYSALICYLIC ACID.—Diplosal is the salicylic ester of salicylic acid and in the intestine is broken up into salicylates. The only advantage of diplosal over sodium salicylate consists in its lesser solubility and therefore in the taste. The same advantage is possessed by acetylsalicylic acid. If diplosal is unobtainable or its cost prohibitive, acetylsalicylic acid may be used in its stead in the same dosage (*Jour. A. M. A.*, Aug. 24, 1918, p. 682).

TWO MAIL-ORDER FRAUDS.—One L. E. Bowers conducted a fraudulent medical mail order business in Chicago under the name of Gallstone Remedy Company, selling a preparation called "Gall-Tone." Joseph H. Pilson conducted a mail order business in New York City and Jersey City, N. J., under such names as "New Life Remedy Company," "Mail-Order Supply Company," "Vital Fire Remedy Company," and "M. J. Moore, Secretary." Pilson sold a mixture of drugs represented to restore "lost manhood," and another mixture of drugs in effect represented to cause abortion in pregnant women. As the result of an investigation, a fraud order was issued against Bowers and Pilson which denies them the use of the mails for their business (*Jour. A. M. A.*, Aug. 31, 1918, p. 765).

BOOK REVIEWS

DISEASES OF THE MALE URETHRA. By Irvin S. Koll, M.D., Professor of Genito-Urinary Diseases, Post-Graduate Medical School and Hospital, Chicago. Octavo of 151 pages, with 123 illustrations, several in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, 14s net.

Physicians will find this work of much value as a part of their medical library. The subject is presented in a manner easy to understand and the ground well covered. Many points are emphasized which the practitioner often carelessly overlooks. The charts and illustrations fit in well with the text and assist in clearness and preciseness. The book will be of much service to the profession.

A. J. W.

THE COMPOSITION OF CERTAIN PATENT AND PROPRIETARY MEDICINES. Compiled by John Phillips Street, Chemist in charge of Analytical Laboratory, Connecticut Agricultural Experiment Station. 274 pages; more than 2,500 remedies; over 3,100 analyses. American Medical Association, 535 North Dearborn Street, Chicago. Cloth, \$1.25, postpaid.

During the past few years hundreds of "patent" and proprietary medicines have been analyzed with the object of giving the public information that would be of vital interest to it. This work has been done by federal and state officials and especially by the chemists of the American Medical Association. The information, unfortunately, has been scattered through many publications and, for this reason, has not been easily accessible either to the public or to officials. The purpose of Mr. Street's compilation is to remedy this difficulty, in a measure, by bringing together in one work an accurate record of published analyses. The book contains analyses (one or more) of over 2,500 proprietary medicines, including the most widely used and extensively advertised products offered to the American public. The analyses are published without comment and without prejudice and the compact form in which they are presented should prove of great usefulness to the physician, the pharmacist, the inspection official and the intelligent layman.

PATHOGENIC MICRO-ORGANISMS, a Practical Manual for Students, Physicians and Health Officers, by William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College and Director of the Bureau of Laboratories of the Department of Health, New York City; and Anna Wessels Williams, M.D., Assistant Director of the Bureau of Laboratories of the Department of Health; Assisted by Charles Krumwiede, Jr., M.D., Assistant Director of the Bureau of Laboratories, New York City. Sixth Edition. Enlarged and Thoroughly Revised. With 209 Engravings and 9 Full-Page Plates. Publishers, Lea & Febiger, New York and Philadelphia, 1917.

When a book has reached its sixth edition it ceases to be legitimate prey for the reviewer and all there remains for him to do is to get into the band wagon and study the musicians. The success of this book, it is easy to see, is due to the fact that the authors know their business, not an all too common thing in the writers of books. These authors have had a long service in the practical application of bacteriology. As a result the pure science of bacteriology is made to serve in the best way possible the purpose of the student, the practitioner and those engaged in board of health work. These qualities make it perhaps the most valuable work in this department at present available.

W. K. T.

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ORIGINAL ARTICLES

PROSTATIC ENUCLEATION *

LEON ROSENWALD, M.D.
KANSAS CITY, MO.

In no other subject of urology has so much change taken place in the last few years as in that of so-called hypertrophy of the prostate. The entire chapter must be rewritten and our knowledge of the pathology must have a complete revision. The clinical history of prostatics is so characteristic that I shall only review the salient points, and afterwards compare them with the pathological findings. In this disease of men past the meridian of life, the most troublesome and compelling symptom is the nocturnal urinations. From getting up once or twice a night the urinations gradually increase in number until the rest and health of the patient are broken. In the beginning the stream still has a fair projection, but is started rather slowly, and the patient is conscious of aiding the flow by abdominal pressure. There is no, or very little residual urine. This represents the stage of congestion, and corresponds to the period when the obstruction caused by the enlargement of the prostate has been overcome by the musculature of the bladder. The bladder is an organ which does not compensate as readily as other hollow organs, and soon enters into the stage of dilatation. Here we find added to the above symptoms the residual urine, which may be from an ounce to ten, fifteen, or more. The walls of the bladder are strongly trabeculated, and may have diverticula, which often contain stones. This corresponds to the second stage, or stage of partial retention.

It is not very long now when the patient passes into the third stage, or stage of complete retention. Errors in diet, exposure to cold and

wet, any excesses, in fact, sometimes very trifling conditions seem sufficient to cause a complete retention. Here we find the bladder enormously dilated, the internal meatal sphincter relaxed, the musculature of the bladder degenerated. The patient dribbles urine constantly. This has been aptly termed the "overflow bladder," or "paradoxical bladder."

During the entire period of prostatism there has occurred a phenomenon of utmost importance, and whose clinical manifestations are very evident. If you would pause for a moment and consider what is happening to the kidneys on account of the back pressure, you could easily conceive that the kidneys are failing to excrete the normal amount of non-protein nitrogenous substances—uric acid, urea and creatinin. Loss of appetite, dryness of throat, difficulty of swallowing, are the real sign posts of a chronic toxemia—the so-called uremia. These digestive symptoms are sometimes of such impelling character that the patient consults his physician for them primarily, and for his urinary difficulties secondarily. The urine is usually of a low specific gravity, large in quantity and clear; such a urine as you would expect to get from an arteriosclerotic condition which is usually associated with prostatics.

Sooner or later the urine becomes infected, either through bacterial invasions from the bowels, or direct contamination from sounds or catheters. To all the other troubles is now added the one of cystitis. Truly, the prostatic has no peace. The various theories propounded as to the etiologic factors of prostatic hypertrophy have given many men much food for speculation, but the one fact that all other tissues and organs atrophied in old men except the prostate, was the one which everlasting would not down. It was here that Zuckerkandl and Tandler made the epochal discovery that the prostate did not enlarge; in fact, it atrophied. But what really happened was that new growths occurred in the prostate and by their pressure

* Read by title at the Sixty-First Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.

thinned out the prostate till it took on the character of a capsule. The varieties of tumors are many, ranging from fibromata to carcinomata and sarcomata. The fibro-adenoma is the one we most frequently encounter and is known as the benign enlargement. Instead of considering the prostate as being divided into two lateral and one median lobe, it must be looked at as composed of an anterior lobe, and a posterior lobe. The posterior lobe is again divided by the ductus ejaculatorius into a superior and inferior lobe. It is in the superior lobe that the neo formations have been found. A glance now at the superior lobe will explain why the urethra is lengthened, why the floor of the urethra is raised, and gives an elegant picture of the obstruction. The growth pushes its way into the bladder and not in the direction of the rectum, unless it has assumed enormous proportions. The diagnosis is completed by a cystoscopic or posterior examination. By this method we gain very accurate information as to the size, character of growth, condition of the bladder wall, stones if present, etc. We now go a step further and inquire into the condition of the heart, lungs, etc., and finding them in fair condition, we are ready to advise operation. At this point I would like to call attention to the lack of kidney functional tests we make. I have entirely discarded the phthalein test as misleading and unreliable. The output of dye stuffs can be normal from a badly degenerated kidney, subnormal from a sound kidney, and in some cases increased from a lame kidney. What is true of the phthalein test is true of other dye stuffs. We have a better guide, I think, as to the functional ability of the kidneys, and that is the urine itself. The normal amount of solids excreted in twenty-four hours is about 60 gm. Here we have a urine of low specific gravity, but large quantity, so we can figure the solids just as accurately by using Haeser's coefficient which is 2.33. Suppose twenty-four hours urine is 1,200 c.c., specific gravity 1.022. Using Haeser's coefficient, we would have 22×2.33 ; 51.26 grams in 1,000 c.c. But the total quantity being 1,200 c.c., we get $1,000:1,200::51.26:x$, or $\frac{51.26 \times 1,200}{1,000}$ or 61.5 grams.

In cases where the solids fall below half this quantity the prognosis is not good; on the other hand, when the output approaches normal we have a favorable patient for operation. In this connection I would like to call attention to the frequent occurrence of diabetes in prostatics. I believe no satisfactory explanation has been offered to account for this coincidence. The treatment of prostatics is divided into two methods; the expectant or palliative, and the operative. The expectant method condemns a

patient to catheter life and all its evils, the physician all the time expecting the patient to get better, and the patient progressively losing ground. The operative method is the only salvation the victim has, and the sooner he is operated on the better chance he has, not only of not succumbing to the operative interference, but of regaining his health, and perfect functional ability of the bladder and kidneys. In reviewing the pathology, the logical conclusion is forced upon us that the two-step operation is the one of choice. Von Dittel conceived the operation of removing the prostate by the perineal route, but it was left to his student, Zuckerkandl, to do the first operation on a living subject. His writings made this route popular with the profession. Fortune was indeed kind to allow him to make such pathological studies to correct him in his error, and convince him that the suprapubic route was the only logical one. To-day as far as I know there is only one man who still champions the perineal route. Equally as important as the suprapubic route is the choice of anesthetics to be used. Our custom has been to do the suprapubic cystotomy under local anesthesia, and the prostatic enucleation under spinal anesthesia. We will consider the technic of the cystotomy first and then take up the enucleation afterwards. We inject a $\frac{1}{4}$ of a 1 per cent. solution of novocain-adrenalin endermically, starting at the spine of the pubis, making a row of wheals about three inches long. Five or six wheals are made across the abdomen and then a row of wheals again till we come to the opposite spine. With a larger needle we now go deeper, injecting the solution above and below the fascia down to the bladder following the line of wheals first made. After ten or fifteen minutes the patient is sufficiently anesthetized to commence work. An incision is made in a straight line starting about a fingers' breath from the pubis extending upwards about two and a half inches, down to the filled bladder. The peritoneal fold is rolled back, and the summit of the bladder presents itself. Two guy sutures of catgut are introduced about one-third of an inch apart. A stab wound large enough to admit the forefinger is made in the bladder between the guy sutures, and the interior explored. The size of the growth is carefully noted. An L glass tube with the short arm covered with a rubber drainage tube is now introduced, the distal end just a little distance within the bladder wall. One of the lower guy sutures is put through the lower angle of the wound and tied to its opposite fellow. The upper pair is handled in a similar fashion except that the stitch should include the rubber. They are then tied. This produces a purse

string around the drainage tube, and makes the bladder water tight. The muscles and fascia are brought together with a few interrupted sutures, and the toilet of the wound completed as usual. The patient is now put on a light diet with plenty of water. The removal of all the back pressure allows the kidneys to become engorged with blood, but this congestion rights itself in from twenty-four to forty-eight hours. The patient begins to feel better. His mind is clearer, and his appetite has made quite an improvement. If the bladder has been infected it will clear up in the course of the following three or four days. The urine becomes remarkably clear. We now arrive at the second stage of the operation. We prefer spinal anesthesia to local or sacral, as being more easily done, and just as safely. Three c.c. of a 5 per cent. solution of novocain-adrenalin is injected, preferably between the third and fourth lumbar vertebrae. This produces an anesthesia long enough to do a hysterectomy without hurrying. The dressings are now removed, the tube withdrawn, and incision carried down large enough to admit two fingers. With the gloved hand the index finger of the left hand is introduced into the rectum and the prostate steadied and pushed up a slight distance. The index finger of the right hand is introduced into the sphincter of the bladder, and with a slight push into the urethra the line of cleavage is found. The enucleation is done by following the tumor mass as far around as possible, always hugging the tumor; the finger is now turned so that the palmar side presents downward and the enucleation continued. The tumor now lies free in the bladder. With a pair of forceps it is lifted out. A small gauze sponge on a forceps held for a minute or two against the raw surface controls what little hemorrhage there is. A few stitches bring the bladder wall together, and a drainage tube is inserted just as we did in the cystotomy. The patient is placed in a slight Fowler position. The kidneys are in fair shape, and we do not expect much of a reaction from this work. In the course of three to five days the urine is clear of blood and then the tube is removed. The edges of the wound are brought together with adhesive strips. Complete healing takes place in from fifteen to twenty-three days. As soon as the tube is removed we allow our patients to leave the bed. Convalescence is usually of an uneventful character.

In concluding this paper, I would make a plea for early operations on prostatics, for the two-stage operations, and especially for spinal anesthesia.

PAINFUL FEET*

ROBERT McE. SCHAUFFLER, M.D.

KANSAS CITY, MO.

Many shoe manufacturers are putting out special lasts called orthopedic, or designated as being especially made to cure some foot disability. In many of the cities the larger stores have a clerk who is called an "orthopedic specialist," who examines and prescribes for painful feet complained of by patrons of the establishment. Most chiropodists now prescribe pads, or lifts, of different sorts for a number of their patients. The shoe market is flooded with arch supports—some for the long arch alone, and some with the addition of some sort of metatarsal support. On all sides an effort is being made to convince the public that these devices are a cure for all foot ills.

In view of these facts, I thought it might be interesting to analyze a series of cases in private practice applying at my office for treatment for painful foot conditions. All cases of infantile paralysis, spastic paralysis and general arthritis, in which the foot complaint was only one factor in a number of symptoms, have been omitted from the list; also acute sprains, fractures and congenital club feet. The eighty cases remaining from the cards reviewed, were then arranged under diagnostic heads according to the main lesions and complications and the etiology, where that was a factor in treatment. Being thus divided, they fall under thirty-seven heads. This in itself would seem to indicate that considerable diagnostic skill was required, as well as considerable variations in the method of treatment, in order to give relief to these patients. The cases fall under the following divisions:

Ankle: 1 sprain, chronic traumatic; 2 subluxation, chronic traumatic; 1 arthritis, infectious; 1 arthritis, tubercular; 2 chronic synovial hypertrophy, associated with obesity and varicose veins.

Mid-tarsal: 2 sprains, traumatic, chronic; 1 arthritis, tubercular.

Tendo Achillis: 1 tendon sheath, inflammatory, acute traumatic; 1 Bursa, inflammatory, subacute, probably gonorrhoeal; 1 contracted; 1 contracted, with anterior arch trouble; 1 contracted, with anterior arch trouble and contracted toes.

Os calcis: 1 periostitis planter surface, gonorrhoeal; 1 periostitis planter surface, infectious; 2 spur formation, plantar surface.

Great toe: 5 bunions; 1 postoperative deformity after bunion operation; 1 gout; 1 cocked toe, due to contracture.

Other toes: 1 old, unreduced dislocation; 1 ram's horn nails.

Unbalanced feet: 2 due to painful corns; 2 due to muscle spasm; 2 irregular crossed tilting.

Four cases of claw-feet, too high arch.

* Read at the Sixty-First Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.

Four cases of arthritis, simulating flatfoot.

Flat feet: 7 weak foot, tending to flat; 2 weak foot, pigeon toes; 1 flat, with anterior arch trouble; 8 chronic flatfeet; 2 irregular flat, due to paralyzed tibialis anticus muscle; 1 associated with marked bowlegs.

Metatarsal arch: 10 simple flattening, with painful callus, or neuralgia; 1 lowered metatarsals, with tilted toes; 1 lowered metatarsals, with bunion.

One case thin sole pads.

One peripheral neuritis, in a one-legged man.

One case of malingerer.

This exhibit alone would seem to establish the claim that these cases require the thoughtful attention of a real doctor, even if you consider the orthopedic surgeon unnecessary. Doubtless any physician could handle the diagnosis and treatment of these cases if he would take the trouble. That is just the point. Many are too busy to take the trouble, make a careful diagnosis and stir no small amount of patience into the treatment. It is useless to insert a support for the anterior arch when the tendo achillis is shortened, unless you also remedy that condition. It is useless to treat a pseudoflatfoot, due to infectious arthritis, with a rigid flatfoot plate; and equally useless to treat a true flatfoot with salicylate of soda or by removal of the tonsils. After a search for sources of pain in the limb or body above let me urge a careful local examination, special attention being given to the attitude of the patient in walking, with the shoes on and barefooted. Note the range of active motion possible to the foot; note the points of tenderness and the callus formations. Also, remember that there is no such thing as a flatfoot without some rolling inward of the tarsal bones on the inner side of the foot.

I have tried to divide these cases into those which need support with adhesive plaster or bandages, hydrotherapy and comparative rest; those which can be cured by proper shoes, provided the patients are taught to walk right and to take such active exercises for their foot muscles as shall restore normal strength and balance; and, lastly, those cases which require more or less permanent support for the long arch, or for the heads of the metatarsal bones.

Every year I prescribe a smaller number of Whitman flatfoot supports, or other rigid devices. A comparatively small dimple behind the heads of the metatarsals, produced by felt fastened to the foot or by hard felt placed in the shoe, either nailed in place or put on the underside of an insole, is sufficient to correct many of the anterior arch troubles. The common mistakes are in making these felt pads too large, or placing them too far forward, or combining it with a longitudinal arch support which is not needed and which often makes it worse.

The choice of shoes is difficult. One group are constructed on the principle that no support should be given to the arch of the foot;

that the patient should walk as nearly as possible barefooted, the shoe only furnishing protection to the foot and guiding the forefoot inward. The ground gripper belongs to this class. Another shoe is made extra rigid by the insertion of a metal shank or an arch support built into the last. The so-called anatomic shoe is an illustration of the second class. Some shoes are built merely with a low heel and very broad toes, with no special shaping. The "Educator" is an example of this group. The Munson army last is good. About 95 per cent. of men can wear them if these conditions are observed, namely, careful fitting, special attention to developing and toughening the foot, a refitting after three to six months.

The great majority of boys, as they grow up, would be benefited by a shoe of the first type. Many little girls, however, who have slender feet with high arches, need to have a nicely fitted shoe which gives slight support to the arch by the shaping of the shoe on the inner side. Every proper shoe should allow plenty of room for the toes, that they may not be crowded together or crowded back. Many people need to have a fairly snug fit behind the heads of the metatarsals, in order to help hold them firmly together and so prevent their being separated at times of special stress.

Among a group of cases, such as reviewed in my table, it is absolutely impossible to put all of them into a shoe which would have been ideal for them in their youth. Many women are worse with a low heel and are better handled with one of medium height, such as the Cuban heel. None should be permitted to continue with the high, narrow French heels, except possibly for slippers for evening wear, when they are not going to be much on their feet. We should strive for as much correction as is reasonably possible considering the age of the patient and the amount of deformity.

One must remember that these people consult a doctor because their feet hurt, and, unless you are able to relieve the pain within a comparatively short time they will not continue your treatment. The general plan is to splint these feet as much as is necessary to relieve pain and, at least, partly correct deformity, and then gradually to withdraw the splinting, making an earnest effort to teach the foot to hold itself in the proper position by the shortening of ligaments and strengthening of muscles, combined with correct shoes, which should have the minimum of alterations or internal appliances necessary to prevent relapse.

In these particular cases presented, only eleven operations were done—six on the toes, two on the tendo Achillis, two on the other tendons, and one on the ankle joint. No more than four other cases could have been operated

upon to any advantage if the patients' consent could have been obtained.

Only four patients were put in plaster casts as a treatment. The treatment was usually simple but distinctly individual to the case.

This analysis of foot cases was made about three weeks ago. In the interval I have attended the meeting of the American Orthopedic Association in Washington. Besides the civilian members, there were over one hundred men present in the uniform of the United States, who are serving in the various camps as orthopedic surgeons. The program was devoted entirely to military subjects. Many of the papers were contributed by men already in overseas service. About one-fourth of the papers and one-half of the discussions was devoted to foot problems. It was reported that out of 50,000 men, carefully examined in one camp, 32 per cent. had weak feet, or some sort of foot trouble; that about 8 per cent. of the whole number had anterior arch troubles, and that about one-twelfth of the men who were marked for foot disability had a shortened tendo Achillis. All agreed that the feet of American men were the worst of any army, and that the number of foot troubles were surprisingly large, even among farmers. A large number of men were already in the habit of wearing ready-made arch supports, and it was conceded that these had done far more harm than good in the majority of cases. One irate surgeon, writing from France, thought that arch supports ought to be forbidden by law.

These men are separated in special training battalions and are kept under full military discipline, with as much drill as is considered safe by surgeons and, in addition, have special treatment for their feet and special barefoot exercises three or four times a day. The Surgeon-General has recently forbidden operations for disabilities not contracted in the service, and much stress is laid on non-operative treatment. It is forbidden to supply men with metal arch supports; temporary felt pads, strapping and shoe alterations are permitted. The shoe alterations consist, usually, in one of three procedures: Extending the heel, thickening the inner side of the heel and sole, or the placing of a crossed cleat in the sole to take the weight off the heads of the metatarsal bones.

All the data collected by military surgeons confirm the opinion that a large number of American citizens suffer from foot disabilities, and that they have not been relieved by the ordinary treatments furnished by shoe dealers and chiropodists.

It seems obvious that it is up to the medical profession in civil practice to pay much more attention to the condition of the feet of their patients, as well as doing missionary work along that line in the community at large.

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CHRONIC BACKACHE FROM AN ORTHOPEDIC STANDPOINT*

ALEXANDER E. HORWITZ, M.D.

ST. LOUIS

General Considerations—a plea for classification.—This paper is based upon a study of 125 cases of chronic pain in the lower spine in which a history of trauma can be traced. The term trauma is used as is explained in the course of the discussion. They all present certain definite findings, which leads us to the belief that a group diagnosis can be made. We will here exclude actual disease, and consider acute trauma only insofar as it may lead to chronicity and to the subject under discussion. That chronic backache may result from various causes, and from causes as frequently not orthopedic will be admitted. There is, however, a similar pathologic condition resulting, no matter what the cause. The symptoms from a traumatic condition leading to pain at the sacro-iliac joints in no way differ from those resulting from an internal pelvic strain upon the sacro-iliac ligaments. The term trauma need not be limited to external violence, but can and should include injury or abuse produced insidiously, of whatever nature. The constant strain upon the posterior pelvic joints produced by displaced pelvic viscera is as much of traumatic character in respect to the damage caused to the sacro-iliac ligaments as would be that of a definite postural or occupational strain upon these joints.

These various causes lead to a complete and definite entity, a condition having a definite train of symptoms and yielding to a definite mode of treatment. The treatment benefiting an orthopedic backache will also benefit a gynecologic backache. It is therefore entitled to be classed as a disease and not to be considered as a symptom. Being an entity it should not be degraded by such terms as lumbago, rheumatism, or even sciatica. Rheumatism should be a term for lay use, not medical (at least not scientific). Lumbago is not an entity, but a symptom, at times a part of a myositis. Sciatica is more often a symptom of and a result of a sacro-iliac abuse than an entity or cause. The older term, carrying with it no significance should be discarded. The new one, advocated in recent years—sacro-iliac strain (or disease) should be adopted.

ETIOLOGY

The term "strain" suggests the etiology. It is a condition produced by causes leading to a stretching of the sacro-iliac ligaments. They may be acute, subacute or chronic in character.

* Read at the 61st Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.

Among the acute may be included sudden injuries produced by (1) lifting too heavy a load; (2) lifting a load heavier than anticipated, although in itself not too heavy for that individual; (3) lifting a load of less weight than anticipated, permitting a too sudden assumption of direct posture and consequent strain upon the ligaments; (4) sudden turning of body to one side, as in picking up or attempting to pick up a fallen or falling subject.

Types of Individuals Subject to Strain.—1. It is found in the individual accustomed to one definite posture during the working day, the bookkeeper, stenographer or bench worker.

2. It is found in the individual who performs constant rhythmic motions involving the spine, the bench worker, the miner, the trench digger.

3. The individual whose occupation requires constant lifting of objects, even of little weight, such as loading brick, loading coal, etc.

4. In sedentary individuals, allowing relaxation of all muscle and ligamentous tone; the writer.

5. The individual who suddenly changes his mode of living from the sedentary to the active.

Strain is not frequent in the active individual, in whom all muscles and ligaments are maintained in the proper tone.

In the female we have a chain of causes supplementing the above.

1. Frequent gestations.

2. Delayed assumption of the normal uterine tone after pregnancy.

3. Prolapse of uterus.

No. 1 produces a relaxed condition of all pelvic ligaments, in which the sacro-iliac participate, and sufficient time is not given for the assumption of the normal.

No. 2 allows a condition to persist after the needs for the relaxation are past.

No. 3 produces a constant drag upon the sacro-uterine ligaments with a resulting strain of the sacro-iliac joints and stretching of these ligaments.

In women suffering with chronic backache, of whatever origin, the symptoms are greatly exaggerated and aggravated during the menstrual period. The cause here is the further stretching of the sacro-iliac ligaments by the congestion of all pelvic structures.

Postoperative Backache.—A frequent cause of chronic backache is the protracted stay upon the operating table. The patient is here placed in an uncomfortable, strained position. Complete anesthesia destroys all ligamentous tone and the lumbar spine and sacrum sag posteriorly. This trauma is slow to recover and permanent injury may result. Those due to a chronic insidious onset are more often bilateral. Those of acute origin are usually unilateral.

PATHOLOGY

An overstrained and weakened condition of the sacro-iliac ligaments, with subsequent undue mobility of the joint. This motion or rather permissible motion of the broad lips of the joint set up an irritation with subsequent thickening. Where an acute tearing of the ligaments has taken place or extensive chronic stretching and great mobility results, this friction is of extensive character, and leads or may lead to an actual arthritis. We here see a broadening of the lips of the joint, as compared to those of the corresponding joint. A broad ridge as contrasted to a sharp one, with well defined walls, not sloping or tapering away gradually into the adjacent portions of the ilium. At times there may be an actual luxation at this joint, simulating a pathological displacement at other joints.

SYMPTOMS

A. Pain: local, referred.

B. Attitude.

C. Muscle spasm.

D. Rigidity.

E. Tenderness.

F. Gait.

Pain.—This is usually intense in the acute stage, is constant and aggravated upon movements, both active and passive. In the chronic, pain is greatest in those movements which originally acted as a causative factor. Pain is also noted in a change of position from a relaxed to a contracted attitude. Jarring of the spine, both in walking and riding, produces pain, at times intense.

Referred pain.—The pain is usually referred down the leg to the knee in unilateral cases, or alternating down either leg in bilateral cases. The history is that of radiating pains, now in one limb, later in the other. The explanation for this is difficult. It may be caused either by a stretched nerve or by pressure.

Attitude.—In those cases of insidious onset the findings are usually bilateral, and the patient stands with the body slightly tilted toward the less involved side, or with body bent slightly forward where the involvement is of equal degree. The lumbar lordosis is diminished and the dorsal kyphosis flattened. Movement of the body is from the hips. In those of acute onset, and where the findings are unilateral, the body is strongly tilted away from the involved side. This tilting of the body is due partly to the desire of the patient to relieve pressure on the weakened side and partly to the uneven contraction and tension of the ligaments of the two sides.

Muscle spasm.—This is seen in those of acute origin only, and is of same character as seen in all acute traumatism.

Rigidity.—The spine, in all acute cases, is rigid, both from muscle spasm and pain. In the chronic, the rigidity and pain resemble that seen in painful flat foot, caused by relaxations of tarsal ligaments. It is noted more upon use of the part after a period of rest, gradually diminishing upon further use, until exhausted by overstrain. The patient, upon rising from a sitting position will frequently catch himself with a sudden sharp pain, and at times be compelled to drop back in his seat. He will frequently give a history of pain and stiffness in the morning, wearing off during the day and gradually coming on toward evening. He cannot sleep on his back, not because of tenderness, but because of actual pain. Placing a cushion under the lumbar spine gives relief. Sitting upright is painful, but less so than when sitting in a slouched attitude.

Tenderness.—There is at times actual tenderness, as when the ligaments are greatly stretched and motion and friction at the joints are permitted. In the former the weakened ligaments, in the latter the irritated lips of the joint are the causes of tenderness.

Gait.—The gait is of a slow and careful character, the step short and knee slightly flexed. A long step, or one with knee extended causes strain upon the sacro-iliac ligaments and produces pain.

SUMMARY

There is a history of a persisted attitude or a certain definite and frequent spinal motion during an extended period of time with gradual onset of pain. This pain demonstrates itself at first upon the rising position, but later becomes more constant and is seen in all motions of the lumbar spine. It is seen in individuals of sedentary life, in individuals whose work consists of certain rhythmical motions of the body in flexion and extension, in individuals who change from a sedentary to an active life. They complain of pain in the lower back, radiating down the limbs. Their gait becomes slouchy, they walk slowly and with knees flexed. They prefer to sleep on their side rather than on the back. They stand with body tilted to one side and slightly bent forward. Motions of lower back are more painful when first attempted, less painful on subsequent movements.

Method of Examination.—Attitude: (1) In those cases where the onset is definite, the patient stands with body tilted away from side involved. Body is bent slightly forward. (2) Where the onset is indefinite, the tilting is less marked, and the forward bending more pronounced.

Gait.—The gait is slow and methodical, the step short, the knees slightly flexed.

The normal curves of the spine are altered, approaching a straight line.

In unilateral cases a disproportion between the thickness of the palpable portions of the joints exists. Tenderness may be present.

Lying on a flat, hard table produces pain.

Raising the leg with knee extended produces pain at joint. This phenomenon exists on raising either leg. In unilateral cases the strain on the ligaments is thus produced no matter which leg is raised.

Compressing the pelvis forward and downward by pressing on the anterior superior spines produces a flaring of the posterior joints and stretching of ligaments with consequent pain.

Absence of tenderness along sciatic.

DIFFERENTIAL DIAGNOSIS

Sciatica.—Bilateral sciatica is rare. Bilateral sacro-iliac strain is the more common. Absence of tenderness over course of sciatic. Flexing leg with extended knee produces pain at joint. In sciatic pain is along nerve only. Flexing leg on normal side gives same findings in sacro-iliac; no findings in sciatica.

All conditions enumerated under "methods of examination" are absent.

Osteo-arthritis.—Other joints involved. Rigidity of spine seen here due to actual bony proliferation. Tilting of body very pronounced. Roentgen ray reveals lipping of all bones. Roentgen ray of sacro-iliac strain reveals nothing.

Lumbar spondylitis and tuberculous arthritis of sacro-iliac joints. Actual diseased conditions revealed by proper examinations.

Lumbar myositis (lumbago), tenderness over muscles. No deformity of body. Leg raising test negative.

PROGNOSIS

Convalescence should extend through a period of six months to one year.

The deformity should yield to corrective measures and not recur after immobilization.

A reinforced belt should be worn for an indefinite period.

The pain should yield to the measures outlined, without the use of drugs.

TREATMENT

Rest where feasible. Adhesive strapping. This should be the first method employed. The strapping should be carried from one trochanter to the other, upward to the crest of the ilium. Anteriorly, only to the anterior superior spines. By carrying them farther to the front, the pelvis is compressed forward and pressure is brought upon the synchondrosis. A pad should be placed over the sacrum. This usually gives a measure of relief. It may be employed for a period of two or three weeks, with changes every four days. This is followed by a belt

built on the same principle or a reinforced straight back corset.

Plaster of Paris. Where deformity exists it should be corrected as far as feasible and plaster of Paris applied in spica form, from the sternum to the knee on the involved side. This dressing is usually retained, with changes, for about one to three months. When symptoms have disappeared, the jacket is next applied. The patient is instructed to refrain from any work or exercise requiring motions of the spine such as brought on the original strain.

University Club Building.

PERNICIOUS ANEMIA TREATED BY MULTIPLE TRANSFUSION AND SPLENECTOMY, WITH STUDY OF A CASE*

EDWIN SCHISLER, M.D.
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In reviewing the literature on the work that has been done in pernicious anemia by transfusion of blood by the citrate method, it is interesting to note that the idea is by no means a new one. Several attempts have been made in the last century to find an atoxic anticoagulant for blood transfusion. Neudorfer suggested the use of sodium bicarbonate in 1860, and Braxton Hicks tested sodium phosphate with the same object in view in 1869. These experiments were failures, and no other attempts along these lines seem to have been made in the last fifty years. Yet these gentlemen had the correct idea. Their endeavors to make the blood incoagulable during the transfer from donor to recipient offered a correct working basis. When Lewisohn began animal experiments with sodium citrate with the object of using this drug in human blood transfusion as an anticoagulant, a 1 per cent. mixture of sodium citrate and blood was considered necessary for prevention of coagulation. Furthermore, it was generally assumed that such a mixture would be toxic when used in the human being; but since then it is interesting to note the results obtained with a weaker solution, so that a thorough trial of blood transfusion by the citrate method will soon become generally adopted on account of the utmost simplicity of technic and the safety of its application.

The indications for transfusion and the selection of the donor are more important than the technic of the operation. The therapeutic value of the blood according to Vincent (*Genec. and Obst.*, p. 621, 1916) is the same, whether transfused by the citrate method, as described by Weil and Lewisohn, with the glass cylinders of

Kimpton and Brown, the pipet-cannula apparatus of Satterlee and Hooker, or the syringe method of Lindemann.

Huetter (*Arch. f. klin. Chir.*, 1871, 12) wrote in 1871, in reference to transfusion: "Too much stress is laid on the technic, as in all operations which are still in the stage of infancy. First a lot of new instruments are invented which are the pride of the inventors, then the technic becomes a minor detail and the indications the main object. Of all the new instruments, only the simplest are kept."

The technic of blood transfusion is now so simplified that it can be mastered very easily by the majority of physicians. We shall have to learn a great deal in reference to the indications. The work in the future will depend on the combined efforts of the serologist and the internist for further development of this phase. Its relapses, remissions and progressive course impress us with the necessity for a more universal study of its manifestations; therefore a thorough trial of multiple transfusion and splenectomy when the condition of the patient permits is warranted.

A study of the results at the present time is slightly confusing, probably due to the opinion that has been expressed by different writers that the laboratory tests are unnecessary. A rather large series of transfusions without the proper tests have been reported, and the absence of any symptoms of hemolysis has been made use of as proof for this contention. This, however, is feasible: to perform twenty transfusions without tests and without serious accident and to have the twenty-first patient die on account of serious incompatibility of the blood of donor and recipient. Such an accident can be avoided by the proper procedures:

1. A Wassermann test must be made in every donor, particularly the professional ones.
2. The blood of the donor and recipient must be tested in order to prevent hemolysis and agglutination.
3. Donors can not be used the second time for the same patient without another test as to hemolysis and agglutination.
4. Blood relatives (parents and children, brothers, etc.) have to be tested just as thoroughly as strangers, since their blood is very often incompatible in spite of their close relation.

Cherry and Langrock in their study of hemolysis in the transfusion of babies, with the mothers as donors (*Jour. Am. Med. Assn.*, February, 1916) have asserted that in newborn infants, the mother's blood can always be used with perfect safety for transfusion. Other workers, however, do not agree with this statement.

Pernicious anemia remains, even at the pres-

* Read at the Sixty-First Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.

ent day, one of the perennial puzzles to the student seeking knowledge on the etiology of disease. It has been characterized as cancer of the red blood tissue, just as leukemia has been described cancer of the white blood tissue, and this is still the theory most acceptable.

Eppinger (*Berl. klin. Wchnsch.*, 1913, 50) suggested splenectomy on account of the decreased hemolysis following the removal of the spleen. He thinks the hemolysis occurs in the spleen pulp sinuses, the blood being diverted there on account of thickening of the obliterated central artery. A persistently low polymorphonuclear percentage would indicate bone marrow exhaustion, whereas a high percentage of reticulated cells with perhaps the Jolly bodies points to increased activity of the bone marrow. Splenectomy therefore is the greatest stimulant to bone marrow, but it can exert this stimulation but once; hence repeated transfusion before and after splenectomy is the next best therapeutic measure.

There is so far no evidence that splenectomy or transfusions have cured pernicious anemia, but there are definite indications of consistent temporary improvement in a majority of instances. Preoperative transfusion has been done in nineteen cases as reported by Giffin (*Jour. Am. Med. Assn.*, 6, lxxviii), one to four transfusions having been given in each instance. A marked gain followed transfusion in eight cases. Very rapid and decided gains were seen in two patients; in one the hemoglobin increased from 10 to 40 per cent. In the other the hemoglobin increased from 16 to 59 per cent., with a gain of 1,500,000 red cells in one month. Each of these patients received two transfusions. In six cases there were gains of only a few points, and in four there was no definite improvement. In one the hemoglobin percentage and red cell count fell, but later, after splenectomy, improvement occurred.

In general, preoperative transfusions have proved valuable in improving the general condition of the patient and in favorably affecting the blood picture. The hemoglobin percentage, the red cell count and the consistently low leukocytes count with relative reduction in polymorphonuclear cells are increased.

Schneider (*Arch. Int. Med.*, January, 1917) concludes that "splenectomy apparently, immediately and permanently reduces the excessive blood-derived pigments of pathologic hemolysis to a normal level. There is no proof that a recurrence of a pernicious blood and clinical blood destruction."

Krumbhaar (*Jour. Am. Med. Assn.*, September, 1916), after a critical study of 153 cases in which splenectomy was performed for pernicious anemia, concludes that on account of the improvement that follows splenectomy, it would appear not only to be justifiable, but in

many cases an advisable procedure; but in no case should a cure be promised or the operation undertaken except under the most favorable conditions.

The best results seem to have been obtained in persons below 50, who have had the disease less than a year and in whom the blood picture is fairly good and the spleen moderately enlarged. It has been fairly well determined, even by the most ardent advocates, that mental, cerebral and spinal cord symptoms are distinct contraindications to splenectomy, and it should be added that the presence of an aplastic bone-marrow is equally forbidding. If the hemoglobin is below 35 per cent., and the red count less than 1,500,000, operation should not be undertaken. When the anemia is marked, multiple transfusion of whole blood, eradication of all local foci of infection present, laparotomy for the removal of the spleen, and the other tissue that shows evidence of chronic infection is necessary.

Case History.—John H., a poorly nourished male, aged 37, was referred on July 15, 1916. Was conscious, suffering with slight pains in lower limbs, and general weakness. History of being sick for about two years with fever; troubled with palpitation and oppression in the chest, accompanying sensations of dyspnea. Swelling of legs and hands, and puffing of the eyes. His appetite was poor; bowels irregular; sleeps fairly well; has lost about twenty pounds in weight; gradually getting weaker and indifferent. Married and has five children, who are all well. His family and past history not important.

Examination showed poor nutrition, marked pallor, skin of a lemon yellow color, with puffiness of eyes, edema of face and extremities; mucous membranes very pale. Pupils react to light and accommodation sluggishly, sclerae a lemon yellow; teeth normal. The heart area is normal with a rather harsh impulse. A blowing systolic murmur over the whole precordia, loudest at the apex. Lungs and abdomen negative; knee-jerks present but sluggish. Temperature 100.2, pulse 104 regular. Urine, 1,330 c.c.; low specific gravity, 1.008; otherwise negative. The report on blood and spinal fluid for Wassermann was negative. Blood showed 3,600 leukocytes, 800,000 red cells, with a hemoglobin of 20, making a color index of 1.8. There was marked deformity of the cells with stripping and discoloration. Nuclear red cells were seen, the normoblast type always predominating. In the present case there is no doubt about the diagnosis, because such a marked pallor would have attracted attention at once and led to a blood examination. But if the patient had been one of the pernicious anemia type, which are not pale, but show a perfectly normal complexion, the diagnosis would surely have been missed by anyone not accustomed to making blood tests as a routine. Even the hemoglobin test will not always set us on the right track, for owing to the high color index, the hemoglobin is often but little lowered.

Patient entered hospital July 17, with temperature 100, pulse 110 regular, with an average of 840,000 red cells, 3,440 leukocytes and 25 per cent. hemoglobin, which were counted daily until July 22, when 250 c.c. blood with a ½ per cent. sodium citrate solution was given by direct transfusion, with a very slight reaction or discomfort to patient. The red cell count twenty-four hours after transfusion was 720,000, with a gradual average increase until July 27 of 910,000.

July 28 the second transfusion of 300 c.c. was given with a slight reaction of temperature (101 F.), the red cells showing a marked improvement with a count of 1,470,000, hemoglobin 40 per cent. The average daily count of red cells showed a marked improvement of 1,800,000, hemoglobin 45 per cent., white blood cells 3,600 until August 4, when he was given the third transfusion of 300 c.c., with a very severe reaction—temperature 104.6 F., pulse 110, weak and thready, with repeated severe chills which proved of no danger, but the red cell count was decreased to an average of 1,330,000 until August 12. On this date Fowler's solution, 10 m., three times daily, was given. There was a second hemolytic chill and a reaction of 102 F. temperature, with no findings in his physical condition to account for the reaction. Patient showed a better color, appetite was good, and he showed an average red cell count of 1,760,000, hemoglobin 45 per cent. He left the hospital on August 20, very much improved, with a gain of 1,000,000 red cells and a 20 per cent. increase in hemoglobin. A splenectomy with exploration for any other foci was advised.

Patient reentered hospital September 26 generally improved, with an average red cell count of 1,960,000, white blood cells 3,100, hemoglobin 45 per cent. A splenectomy with an exploration of abdomen was performed on October 10 by Dr. H. S. McKay. Average blood pressure: systolic, 137; diastolic, 88; taken during operation. Examination revealed enlargement of spleen which was removed, the adjoining viscera pale, but negative. The average red cell count of 1,700,000, with an increase in leukocytes to 7,000. Patient made an uneventful recovery and left the hospital on November 5, showing a cell count of 2,150,000, leukocytes 6,400, hemoglobin 45 per cent., blood pressure: systolic 132, diastolic 70, with a general physical improvement.

Patient returned December 27 very much improved, complaining of slight stiffness in knees and ankle joints, appetite good, and he claims he feels stronger. Red cell count was 2,450,000, white blood cells 5,600, hemoglobin 55 per cent., temperature 98.3 F., pulse regular 80.

Reports were received monthly, which were favorable until September, 1917, when he claimed he was subject to loose bowels, which were persistent and could not be controlled by usual medication. He was advised to reenter hospital, which he did on September 5, with a history of severe griping and an average of six stools daily. No nausea or history of passing any blood. Complained of pain and stiffness of joints, with swelling. Temperature 100 F., pulse 94 regular; blood pressure, systolic 105, diastolic 50. Pain in liver and gallbladder area. You will note that when exploratory was done, the gallbladder and liver were found normal, so if there is any focus in this region, it must have developed since. Examination showed a general weakened condition with marked swelling and no redness of upper and lower extremities which were painful. Slight tenderness over gallbladder, otherwise negative. The red cell count showed 1,000,000, white blood cells 12,000, hemoglobin 30 per cent. Urine negative; feces showed blood, otherwise negative.

Now was it possible that the drinking water was an irritant and caused this bowel trouble (patient visited Mineral Wells, Texas)? After a few days his condition improved on a forced soft diet without any medication. He was given Fowler's solution, 10 m., three times daily, and he left for home with a red cell count of 1,400,000 and was very much improved after a stay of twelve days.

Patient reported on Oct. 20, 1917, and his chief complaint was stiffness in joints. Claimed his appetite was good, bowels regular and in general doing fairly well. The examination showed skin pigmented, joints

thickened, no inflammatory process. Blood pressure: systolic 120, diastolic 80; average red cell count of 1,700,000, white blood cells 11,800, hemoglobin 50 per cent.

Patient returned to Burkburnett, Texas, Oct. 30, 1917, and from repeated reports was doing fairly well, with the exception of the stiffness of his joints. On Jan. 6, 1918, I was informed of his death, lobar pneumonia being the immediate cause given.

CONCLUSION

In what cases of pernicious anemia, then, should splenectomy be undertaken? One of two lines may be followed, and at present it is too early to say which if either is correct. If splenectomy merely induces a remission, and this is the opinion of the majority of observers, it should be logical to undertake it as the last resort only, merely with the hope of prolonging life, when all other methods have proved unavailing. Even under such limitations the procedure has already proved its value, and in several cases moribund patients have been brought back to life of comparative well-being for many months. Assuming, on the other hand, that an occasional patient may be, for practical purposes, cured of the disease and giving due weight to the view that greater and longer improvement is obtained if the operation is performed before the disease has reached its final stage, it would then be advisable to undertake it as soon as possible. Another factor that may prove to be decisive is whether or not increased hemolysis can be proved. In those cases with clinically enlarged spleens, icteroid appearance and increased urobilin output, without increased resistance of the red cells, the prognosis is distinctly more favorable than in the opposite types. The condition of the bone marrow is also important, splenectomy being contraindicated if the bone marrow is persistently aplastic. It has also been a matter of clinical observation that those individuals in whom spinal cord symptoms have already developed are less apt to be helped by the operation, but have been greatly benefited by multiple transfusions.

I wish to extend my thanks to Dr. R. B. H. Gradwohl and to Drs. Williams and Wilson of the staff of the hospital for their active cooperation.

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DISCUSSION

DR. R. B. H. GRADWOHL, St. Louis: I had an opportunity of observing the case that Dr. Schisler reported and can say that the results he obtained there I think were very good. The method of preparation of citrated blood is very simple. The question of obtaining donors for this work seems to be solved in large cities by having always at hand a few professional donors who have been tested and classified. In smaller communities it would be just as easy to carry this work out because there are always plenty of strong individuals whose blood could very easily be tested. I have seen now about six cases of pernicious anemia

in which this method has been tried out, and all of them show some degree of success.

It seems to me also that the use of arsphenamin in connection with blood transfusion has given some good results; this cannot be denied. In two cases where the combination treatment has been followed I have seen the best results. In one case it seemed that the arsphenamin was probably doing more good than the transfusion of blood. Perhaps the most notable success I have seen in the transfusion of blood was in one case of pernicious anemia in a young man, and that individual is alive today and in pretty good shape, two years after the first transfusion. A very interesting part of this history is that after he had had a number of transfusions and had his hemoglobin raised from 15 to 80 per cent., he fell in the hands of a Christian Scientist who has taken unto himself all of the credit of the success of this case, and the patient himself gives the credit to this irregular practitioner.

DR. G. CANBY ROBINSON, St. Louis: In regard to the safeguards we should take before transfusion, I would like to mention a case which I happened to see in the clinic of the late Dr. Theodore Janeway. A man was transfused and on the following day developed a high temperature. This was followed by an afebrile day and then again his temperature rose. Then his blood was examined and it was found to contain malarial organisms. When the donor was examined it was found that he had latent malaria, and a very remarkable thing had happened. The malaria had been conveyed by the transfusion to the patient with pernicious anemia. He quickly responded to quinin and apparently did not suffer from the effects of malaria, but this case illustrates the importance of examining the blood for malaria organisms as well as carrying out the other tests.

DR. E. SCHISLER, St. Louis: The transfusion does not apply only to pernicious anemia, but also in those postoperative cases where the patients very often suffer from great loss of blood would find it advisable, because those cases suffer with nausea, pain and great exhaustion that cannot be controlled by medication. I would offer the suggestion that these classes of patients, instead of allowing them to take six months or a year to recuperate, should be given a transfusion of a small amount of blood. You will be surprised at the unusual results in these cases. There is one thing you will always note, that there is an immediate improvement. In spite of the anemia, a favorable cycle can be established and they will overcome the exhaustion and the ringing in the ears. I think after a while with the common use of the citrate method of direct transfusion, the general health of the patient will be very much improved.

NEED OF A WELL EQUIPPED LABORATORY IN CONNECTION WITH THE STATE BOARD OF HEALTH *

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It is almost universally acknowledged at present that there should be in every state some certain body whose duty it is to look after and safeguard the health of the citizens of the commonwealth. Every state in the American Union has some such body, differing largely in

the constitutional powers delegated to it and in their efficiency properly to perform the work for which it is constituted. These powers range from the most perfunctory suggestions in some states to very efficient and mandatory powers in others.

In Missouri this work is placed in the hands of the State Board of Health, consisting of seven members appointed by the Governor, and it can probably be placed in the average class as to powers and duties delegated to this board. Handicapped as the board has always been by a serious lack of funds, and sometimes by the absence of satisfactory enactments giving it the proper power to perform duties that should be performed, it has been far less efficient than those in some of the older and more populous states.

As a community increases in wealth and population, the duties and requirements of such boards are largely increased. The experience of every state has seemed to indicate that in order for such a body to perform the duties necessarily incumbent upon it, there are certain things essentially necessary. Of these, one of the most important has been found to be a complete laboratory, in which examinations may be made and diagnoses rendered, not only upon communicable diseases, but upon many other things as well. That this laboratory should be under the direct supervision and control of the body having in charge the health of the community, has been the judgment of the large majority of the commonwealths of the Union. Such a laboratory is necessary in order to bring to bear upon the diagnosis and control of local outbreaks of communicable diseases the experience of state officers and the facilities of a complete, well governed laboratory, under their control. The ideal condition would be, that when outbreaks of disease are reported by local physicians and health officers, an officer be promptly dispatched to the scene with instructions to cooperate with the local authorities and prevent, if possible, a further spread of the disease. Without criticizing in any manner the local officers, the fact remains that on account of local pride, or probably the direct neglect of duty, such outbreaks are far more likely to be treated lightly when left to the local authorities alone than they are when such authorities are reviewed by an officer of the state. In order that such state officers may properly perform their duties, it is essentially necessary that there should be a laboratory in which such diseases as typhoid, diphtheria, dysentery, infantile paralysis, and cerebrospinal meningitis, and others of less frequent occurrence may be properly diagnosed, and the necessary laboratory investigations made. The fact that public health work of today requires laboratory examinations, and that these examina-

*Read at the Annual Meeting of the Missouri State Medical Association, Jefferson City, Mo., May 6-7-8, 1918.

tions be made with dispatch, and conducted by a competent, well-trained officer, almost goes without saying. That such work can best be done under the direct supervision and control of the State Board of Health, seems to me to be almost self-evident.

To the general practitioner the State Board of Health is a body with which he has very little acquaintance. He has heard of it as holding examinations for the licensing of new physicians, and possibly in the way of a trial conducted against some unfortunate brother who has been guilty of unprofessional conduct, but as he is not especially interested in either of these, he takes very little interest in the constitution or the work of that body, but when this same board of health can produce something that is of vital importance to him in his daily duties, it becomes entirely different and he recognizes the State Board of Health as being a body that is of signal use to him in his regular work. Nothing brings the ordinary practitioner and the State Board of Health into such intimate relationship as a well equipped and efficient laboratory in which his specimens may be examined. Such a laboratory, under the direction of the State Board of Health, insures a more prompt and accurate diagnosis of communicable diseases by a free examination of specimens.

A large majority of practitioners in any state will neglect such examinations and trust to a hit-or-miss diagnosis if the examinations must be made at the expense of their clients. A state laboratory saves all this expense to the citizens of the state, affords means for the investigation of epidemics and gives facilities for original investigations as to the cause and prevention of disease.

Many of the small cities will neglect an examination of their drinking water and will take no measure to determine its suitability if the examination must be paid for, while nearly all of them will send specimens if the examinations are made free of charge.

Sewage pollution of public waterways, and private sources of supply is one of the most frequent causes of danger to public health, and should be under the supervision of a competent state officer, as the question of the disposal of sewage requires both a bacteriological and chemical analysis. It is but reasonable to expect that this will be better done when under the supervision of state officers, who have at their command a central, well equipped, efficient laboratory.

The health departments of the several states are now called upon by the United States Treasury Department to issue, after an examination, certificates covering the drinking water furnished by the common carriers of the state. This could hardly be done satisfactorily except

in a central laboratory under the direction and control of the State Board of Health. The state of Wisconsin, which has a strong health department, makes a complete chemical and bacteriological analysis of the supply that furnishes water to cities and towns and supplies coming from deep wells, every three months if so requested. Bacteriological examination alone is done every two weeks, or once a month if requested. They also examine water for nitrates, nitrites and chlorine in each instance. This laboratory has on its books the names of 71 per cent. of all the physicians in the state as having sent in specimens and 45 per cent. of all the physicians of the state are using the laboratory regularly. They have also made arrangements so that the laboratory shall receive three mail deliveries per day, all mail addressed to it being treated as first-class matter and delivered from the postoffice by the postal authorities. They have also arranged to have one mail delivery on holidays, so that the laboratory is open every day in the year. That state has adopted a plan recently whereby laboratory facilities will be so broadened as to have in almost every community where there is located a city of sufficient size to support it, a laboratory under the control of the central state laboratory. It is planned that the central laboratory will become one of research largely, and a place for the manufacture of biological products needed in the state.

Virginia has also lately adopted such a plan and is now putting it into operation. That the work done by our Missouri health department is exceedingly meager is evident, when compared with that being done in many other states of the Union, and if we are to keep pace with the commonwealths about us, it is essentially necessary that we should be diligent at all times in obtaining from our legislature more generous appropriations in order that the health work may be extended.

Many of the states have recently instituted the Wassermann test, and have placed it at the free disposal of the public. This should be done, not only as a humanitarian measure, but as a war measure as well. The government at present is making strenuous efforts to have the state boards of health in the different states exercise some control over venereal diseases, and are basing their claims, not upon humanitarian grounds but simply as a measure of war expediency. The Missouri State Board of Health has been called upon urgently to place in operation a system of the reporting of venereal troubles, but in the absence of any statute on the subject, it is a work that for the present can be little more than suggestive and advisory.

There are something over five thousand inmates in all of our state hospitals combined, and the officers of these institutions estimate

that between 20 and 25 per cent. of them are there because of syphilis, and of these the average age of admission is 35 years. No one can say how much an early, free diagnosis of this trouble would diminish this number, but it would not take a long stretch of the imagination to conceive that the diminution would be very marked. In justification of its propaganda for the surveillance of venereal troubles, the government cites the fact that in the Gallipoli campaign alone, 30,000 men were invalided home, permanently disabled for military service, while the numbers permanently disabled in France are so large as to be almost unbelievable.

It has been estimated that gonorrhoea is responsible for 95 per cent. of the existing ster-

year for its support. The following legislature appropriated the sum of \$24,500 a year for all its departments, while our last legislature appropriated only \$18,775 per year. Out of the entire appropriation, the sum of \$750 per year was set aside for the use of the laboratory. You can readily see how insufficient \$750 would be for a laboratory for the whole state of Missouri. We have said much in derision about the state of Arkansas, but she appropriates more money and does a great deal more work in her laboratory than does our own state, while even the little state of West Virginia appropriates nearly twice as much for the board of health as do we.

In extenuation, however, it may be said that many of these states place under the control of

State	Appropriation Laboratory	Routine Wassermann	Free	Child Hygiene	Biologicals Furnished Free
Alabama	None (Specifically)	No	.....	.....	Anti-rabic, diph. tox. at reduced prices
Arizona	\$ 3,000	No	.....	.....	None
Arkansas	21,980	No	.....	.....	Typhoid vaccine, other at 50%
Colorado	20,150	Yes	Yes	.....	None
Delaware	8,500	No	.....	.....	Diph. tox. to indigent
Florida	153,000	Yes	Yes	.....	Diph. tox., typhoid, tetanus
Georgia	30,500	No	Soon will be	.....	Diph., anti-rabic and typhoid vaccine
Indiana	85,000	Yes	Yes	.....	None
Iowa	18,000	Yes	Yes	.....	None
Kansas	75,000	At State hospitals	At State hospitals	Yes	Diph. toxine
Maine	30,000	Yes	Yes	.....	Typhoid vaccine
New Jersey	145,000*	Yes	Yes	Yes	None
New York	570,575†	Yes	Yes	Yes	All kinds
North Carolina	144,000	Yes	Yes	Yes	Typhoid, smallpox, paratyphoid, pertussis
North Dakota	4,050‡	Yes	.....	.....	.....
Ohio	128,382	Yes	Yes	Yes	2% silver nitrate
Oregon	12,500	Yes	Yes	.....	None
Pennsylvania	2,625,802	Yes	Yes	.....	Smallpox, diph. tox., tetanus anti-tox.
Rhode Island	29,400	Yes	Yes	.....	Diph., typhoid, antimeningitis and tetanus
S. Dakota	13,400	Yes	Yes	.....	Diph., typhoid and smallpox vaccine
Texas	100,700	Yes	Yes	.....	None
Vermont	42,000	Yes	Yes	.....	Diph., anti-pneumonia serum type I
West Virginia	33,000	Yes	Yes	.....	Smallpox, typhoid vaccine, in emergencies
Virginia	400,000§	Yes	Yes	.....	None but at wholesale

*For 1918.

†July 1918, July 1919.

‡Covering deficit.

§Includes tuberculosis work.

ility in the human family. A central, well equipped laboratory where a diagnosis of this exceedingly common trouble could be quickly and efficiently made, would do much to remedy this condition.

Dr. George H. Jones, secretary of the Missouri State Board of Health who has assisted me in this paper, sent questionnaires to the board of health of each state in the Union. Replies were received from twenty-three, and with the idea that a comparative statement of the work done in Missouri and that of her sister states would be interesting, I have prepared a table in which I have attempted to give the most striking features.

It will be remembered that when the Missouri State Board of Health was put upon its present basis it spent an appropriation of \$32,000 per

the State Board of Health their bureaus of sanitation, venereal diseases, child hygiene, food and drugs, and tuberculosis, where in my judgment they rightfully belong.

Out of the twenty-three states reporting, five report child hygiene departments, and these are Kansas, New Jersey, Ohio, North Carolina and New York.

In the Missouri State Laboratory, hampered as it has been for funds with which to employ competent men and to buy supplies that were needed, there have been made in the years 1913 to 1916, inclusive, approximately 5,000 examinations per year. The estimated cost of these, had they been made in a private laboratory, would have been about \$9,000 annually, and the approximate cost to the people of the state in

the State Board of Health laboratory was less than \$2,500.

The state of Virginia which has an exceedingly efficient, well conducted health department, gives the cost of all examinations in the laboratory for last year as \$6,100, while they estimate the cost of the same examinations had they been made privately at \$41,000. Their laboratory reports a yearly average of 17,000 examinations of all sorts, while Missouri shows less than one-third of that number, with a population that gives Missouri the seventh place among the states of the Union, while Virginia takes the eighteenth place in the matter of population.

In order that we may appreciate our own position in the matter of disease prevention, it may be well to make certain comparisons. According to a table compiled by Dr. Charles V. Chapin, one of the best known health officers of this country, for the American Medical Association, which table was made after a very careful survey, we find that Missouri occupies a very unenviable position:

PER CAPITA EXPENDITURE

Florida	\$15.21	Colorado	\$ 2.19
Pennsylvania	12.70	Virginia	2.09
Maryland	10.54	Maine	1.95
Vermont	9.27	Ohio	1.80
Nevada	7.59	Illinois	1.78
Montana	5.45	Oregon	1.78
Idaho	5.22	Oklahoma	1.61
Massachusetts	4.95	Wisconsin	1.56
Louisiana	4.93	North Dakota	1.48
New Hampshire	4.81	Michigan	1.48
New Jersey	4.47	Iowa	1.46
Delaware	4.04	South Dakota	1.43
California	3.96	Kentucky	1.27
Arizona	3.76	Wyoming	1.24
Minnesota	3.25	Georgia	1.21
Rhode Island	3.14	Texas	1.13
Utah	2.93	Alabama	1.11
Kansas	2.60	Washington	1.08
New York	2.87	Mississippi	1.20
North Carolina	2.60	West Virginia	1.02
Indiana	2.31	Missouri .....	.86
South Carolina	2.21	Nebraska .....	.85
Connecticut	2.21	Tennessee .....	.73
Arkansas .....	.55		

In evidence of the fact that the laboratory should be under the control of the board of health, we find that of the twenty-three states reporting, twenty of them have their laboratories conducted wholly by the State Board of Health, while three of them are conducted by the state university, but are known as laboratories of the State Board of Health. Examinations in all are free; Wassermanns are conducted in eighteen of them free of charge. Water supervision by the state board of health in sixteen and biological products are furnished free in twelve, and at reduced prices in nine states.

The Pasteur treatment for the prevention of rabies is administered at the Missouri laboratory free to indigents. Material is furnished by the United States Public Health Service, and preparation is completed at the time of administration. Should the government discontinue

furnishing material for this, we would be compelled to drop this work, as we are not prepared to manufacture biologicals. An interesting feature gathered from the reports received from the Southern states shows the great prevalence of this trouble in some sections of the country. During the year 1917, Alabama treated 269 cases of this trouble, while Georgia had 1,972; North Carolina had 364 to whom she administered 4,375 doses.

The state board of health of North Carolina consists of nine members, five of whom are appointed by the Governor, and four are elected by the North Carolina State Medical Association, thus forming a partnership between the state and the medical profession in the conservation of human life. This recognition by the state of the fundamental relation of the medical profession to the work of prevention of disease is but a just acknowledgement of the debt society owes to our profession for its unselfish experimentation and the discoveries which form the basis whereby the state may be advised of the proper methods of safe-guarding the lives of its citizens.

If I were asked to give in a word, a reason why Missouri has not done more in the way of disease prevention, I should unhesitatingly answer, on account of the lack of sufficiently high ideals of the medical profession itself as to what should be done. Little is ever accomplished without an ideal in view to which our energies can be directed, and it seems to me to be exceedingly important that the medical profession itself decide upon what Missouri should do, and then work with a united effort to the realization of this ideal.

Before the other things which we would have can be added unto us, we must have a more liberal appropriation of money for the use of the health department. And right away I am sure some one will revert to the old cry of the state's poverty and inability to raise sufficient revenue to meet its obligations. I would call your attention again to the fact that the last legislature appropriated the sum of \$50,000 with which to pay for the slaughter of diseased animals for the years 1917 and 1918, and \$127,300 to pay for animals which were killed during the years 1915 and 1916. They also appropriated over \$4,000 for the payment of premiums to encourage the raising of fine poultry in the years 1915 and 1916, and \$25,000 for educational work and premiums for the Poultry Experiment Station for the years 1917 and 1918. While for the preservation of human life and health of the citizens of the state, they appropriated the sum of \$37,550 for the years 1917 and 1918, or \$18,775 per year.

I am very much of the opinion that if the six thousand physicians of this state would

exert their influence these figures could be very much modified, and if an appropriation must be cut, certainly those for our eleemosynary institutions and the prevention of disease among our people should be the last.

It should be possible for the board to give the average dweller in the small towns, villages and the rural districts of Missouri that information which will enable him to protect himself and his family. The true fruits of public health are only to be reaped when the people have been directed to the measures of right living which no laws can enforce and no officer direct. This can only be accomplished through educational publicity. We should be enabled to do something similar to the work carried on in Virginia. In that state the board of health issues health bulletins and gives approximately eighteen issues per year. These are written in popular language and contain the results of tested methods of preventing communicable diseases. These usually run about 40,000 and are sent to every citizen of the districts whose names can be procured, and where epidemics occur or where there is a probability that general knowledge will tend to the prevention of an epidemic.

Several states have a scheme whereby bulletins on the care of infants are sent to every mother, the birth of whose baby is legally recorded. These bulletins are so written that they are exceedingly readable and may be understood by almost any mother, and it seems to me that they must be productive of much good.

Lectures in different parts of the state, given annually by officers and employes of the board, would be another method of disseminating public health knowledge. The main highways of the state could be placarded with tin signs, carrying important health messages at a small cost. Possibly a greater number of people could be reached by moving picture films on health topics than in any other way.

There should be worked out a plan to assist local health authorities in a better organization and coordination of their health work and supplying them with technical advice and laboratory facilities which are not always available in any city and not at all available in the smaller towns. This would require an officer to confer with the local authorities and assist in the filing of reports and in many instances the drafting of local ordinances for adoption by the towns and cities. This work would be relatively inexpensive and enable cities and towns to procure technical advice without cost, whereas they would otherwise have to employ a highly paid private investigator for the work, a thing which experience has shown they are not prone to do.

These things, together with an adequately

equipped, well supported central laboratory, with branch laboratories if possible in different parts of the state under the control of the central laboratory, would enable Missouri to take rank among her sister states where her population and wealth would naturally indicate that she should be. This central laboratory should be so equipped that its work might be largely research investigation, together with the manufacture of biologicals to be furnished to the state.

This I would designate as the ideal condition towards which we might constantly work, and while it is probably impossible for us at this time to expect anything approximating the ideal, still it is only reasonable to demand that the state laboratory should be more liberally and generally supported. That this can be done, I have no doubt, provided the physicians of the state come to realize its necessity, its importance and its convenience, and bring their united efforts to bear to convince those who make the laws of its importance.

If this association can bring its own members to the realization of the importance of this work, and can present an unbroken line, demanding that some such scheme be instituted, there is no doubt of what the result would be.

SOME NEGLECTED FIELDS IN MEDICINE AND THEIR RELATION TO GEN- ERAL PRACTICE *

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If any physician will take a retrospective view of his medical career he will agree with me when I make the statement that there are a good many fields in medicine that have been neglected by the general practitioner—fields wherein not only has he paid the penalty, but his clientele as well.

Personally, he has lost the experience which would have made him a better doctor, remuneratively his loss is an unknown quantity; intellectually, in neglecting these fields in medicine, he has lost one of the very best opportunities to broaden and cultivate his mind; the investigation of some of these fields would have opened up new worlds of thought to him, thereby cultivating a more tolerant and unselfish spirit toward his colleague. We should throw aside our prejudice and be willing to investigate any new therapeutic idea that presents itself, and not in an offhanded, egotistical manner ridicule a therapeutic measure of which we know nothing. Regular medicine is broad enough to incorporate in its arma-

* Read before the Johnson County Med. Soc., June, 1918.

mentarium any therapeutic idea of whatever nature that has or may prove of any value.

You will agree with me when I say that it is a duty we owe to ourselves and our patients to give them the benefit of any kind of treatment that will aid in giving relief. Our patients employ us for the purpose of getting relief from their mental and physical disabilities. It makes no difference to them what means are used so long as we relieve them and no harm is done. If our efforts fail, we should be honest and tell them we have exhausted our resources, so that they would be free to make any changes they desired; and if we had any knowledge of other methods that might help, it would be our duty to enlighten them. Authentic statistical reports state that only about one-fifth of the public in the United States patronize the regular profession, which includes allopaths, eclectic and homeopaths; the balance going to various cults. This is certainly a sad commentary on our profession. One of the most important reasons for this condition is our neglect to investigate the newer therapeutic fields in medicine, and as a result not only we but our patients as well suffer from our egoism and prejudice.

A series of papers could be written on any one of the neglected therapeutic fields in modern medicine. My object in preparing this paper is to call your attention to some of the common every-day conditions that should be remedied as far as possible. We pride ourselves on being considered by the public the custodian of their health, and one of our main watchwords is "Preventive Medicine." One of the most important factors in the prevention and treatment of disease is "diet." We have not given the proper attention to this all-important branch of medicine. You have at times been told, after giving instructions regarding diet, that they are entirely different from Dr. Blanks. Even now you will find doctors who still adhere to the old starvation plan in the treatment of typhoid fever. I am convinced of the fact that more patients have died from starvation than from the fever. Scientific investigation and clinical experience have proved conclusively that the digestive powers are practically normal in typhoid fever. Dr. Alfred W. McCann says the medical profession has paid very little attention to the work of observers regarding the chemistry of food products and its use in the treatment of disease. Drennin established the fact that the withdrawal of calcium caused fatty degeneration of liver cells. You know the effect upon the fetus if the mother is deprived of food with a large calcium content. The child is handicapped by lime deficiency, as a result the bones do not grow normally, its teeth do not erupt properly and later decay quickly. All other food minerals are equally important. That new-old disease "pellagra" is claimed to

be due to an unbalanced ration, and it has been definitely determined that beri-beri is due to a deficiency of vitamins in food. I mention these facts to show the importance of food. The more attention we give to dietetics the better results we will have in our treatment of disease, especially of a chronic nature. What we should strive for is a common ground along this line, avoiding conflicting dietetic instructions.

Diseases of the Skin.—If you should drop into the office of the skin specialist you would be surprised to see the number of patients in waiting, with all kinds of skin troubles. An experience of this kind should make you realize that you were neglecting this medical field. We are to blame for so many common skin diseases going uncured at home. Many cases are unable, financially, to stand the expense of being treated by the specialist, consequently have to go untreated. There are very few skin diseases that cannot be handled successfully by the general practitioner. It is certainly to be regretted that treatment of such a common condition known as "acne" is so flagrantly neglected, when we know that it invariably causes a facial disfigurement that becomes permanent. There are hundreds of boys and girls whose complexions are absolutely ruined by this neglect, the common idea is that nothing can be done for it. Another very prevalent idea is that warts, moles and birth-marks should not be removed for fear skin cancer may develop. We know that two years ago seventy-six medical journals devoted their entire July issues to the subject of cancer, and the consensus of opinion was that all moles, warts and facial blemishes should be removed in order to prevent the occurrence of skin cancer, and for cosmetic effect. It is our duty to make known these facts, by instructing our patrons.

Even that dreaded disease cancer can be treated successfully by the general practitioner. Why should any physician hesitate to give home treatment to a case of cancer, especially skin cancer, when we find some layman doing that very thing. They have gotten hold of some formula of a caustic nature found in all our works on skin diseases, perhaps a hundred years old, and surrounded it with a hereditary history and made a credulous patient believe they had a wonderful cancer cure. We are to blame for these things. If we would investigate we would find by the aid of medicines internally, and other measures externally, results in malignant conditions, especially epithelioma, are very gratifying.

Diseases of Respiratory Tract.—If every physician would make a careful study of the diseases peculiar to his locality I am afraid the specialist in many instances would disappear.

This is a field in medicine that certainly has been and is neglected in every community. A volume could be written upon any one of the diseases peculiar to the respiratory tract. I can only call your attention to some that are commonly neglected, as asthma, hay fever and tuberculosis, etc.

I can not conceive of any legitimate reason why any physician should be continually telling this class of patients that nothing but a change of climate will do them any good. This idea has been so thoroughly impressed upon the minds of some cases that to them a change of climate consisted of a sojourn in the cooling department of a packing house, in the same locality where they resided. If we would but remember that asthma and hay fever are of symptomatic origin instead of diseases *per se*, we could treat them more intelligently and successfully and stop this unnecessary advice. No well-informed physician will deny the fact that there are cases of diseased tonsils that should be removed, nor on the other hand that their removal has become entirely too common. Dr. Max Talmý says that the trauma psychological and physical occurring from tonsillectomy deranges the vegetative functions of the nervous system, and that such derangements are the most striking symptoms in infantile paralysis. There is often mutilation of the palate, arches and pharyngeal wall, which even the most skillful operator cannot always avoid, and some cases do not heal for weeks after the operation. It also eliminates a valuable protective substance secreted by the tonsil, the nature of which is yet unknown; the tonsil may have the same relation to infantile paralysis that the thyroid gland has to acromegaly, cretinism and myxedema. The conservative surgeon or specialist will concede that tonsillectomy is a major operation, and that there are always serious elements of danger to be considered, as death from shock, postoperative hemorrhage, or the anesthetic. There are able physicians who contend that enlarged or diseased tonsils can be removed by other measures external and internal without in any manner endangering the life of the patient. These expressions apply to adenoids as well. During the last forty years the mortality in pneumonia has increased three and one-half times. Is this dreadful waste of human life inevitable, or is it the direct result of the nihilistic teaching of authorities who are grounded in the doctrine of "self limited disease," and doggedly refuse to listen to the assertions of others just as able, just as honest in purpose, who claim that medicine as well as other measures are not powerless in pneumonia, and that it can often be cured without waiting for the crisis? In treating this formidable disease we find some physicians still cling to the old "do nothing" system except the

cold air and ice pack. You perhaps have known physicians who would insist on having the room so cold that the nurse with plenty of wraps on, could not remain very long in the room with the patient, under these circumstances one might expect the unfavorable results which usually occur.

Diseases of circulatory system and aged. Under this heading we have apoplexy, heart disease, arteriosclerosis, paralysis agitans, prostatitis, etc. I believe we will all agree that we have neglected our duty toward our senile patients. Can we offer any reasonable excuse for this conclusion. As I understand it, our duty is the prevention of disease, preservation of health and the prolonging of life. I believe that a large percentage of cases of the above-mentioned diseases can be cured and all can be helped by the use of some of our modern methods in conjunction with already recognized methods of treatment.

It would be impossible to cover the entire ground in this paper, but I will endeavor to make it as broad as possible and in a general way call your attention to the following conditions, in which according to recent authentic medical literature results in treatment have been exceedingly satisfactory and in some cases almost startling. In the face of experience what right have we to make a positive statement that nothing can be done in a seemingly hopeless case in the following conditions: nephritis, diabetes, deafness, insanity, mental defectives, cataract, fibroid tumors, ankylosed joints, whooping cough, infantile paralysis, heart disease, apoplexy, gallstones, piles, fistula, delayed union in fractures, enlarged prostate, ordinary diseases of the eyes, ear, nose, throat, cutting carbuncles, boils and felons, rheumatoid arthritis, varicose veins and ulcers? Personal experience and the literature to which I have had access justify me in assuming the optimistic position that I take. We never know how much we can do in any case until we try. Pessimism has no place in medicine. The examination of our boys for the army has shown that one-third are unfit physically for military duty. This is certainly a startling condition and shows conclusively that there has been neglect somewhere, and yet we can say advisedly that the United States has the best doctors on earth. Our surgeons lead the world in original research and operative technic. In mentioning the above diseases permit me to say that by the use of some modern methods most of them can be cured and all can be helped; hearing can be restored, cataract dissolved, enlarged prostate absorbed as well as fibroid tumors, formation of gallstones prevented, or dissolved after forming, ankylosed joints loosened up making useful limbs, insanity prevented or minds restored,

paralysis prevented in poliomyelitis, apoplexy warded off.

Specialism.—If we consider specialism this alone will prove to us conclusively that the general practitioner has been and is neglecting valuable fields in medicine. The specialist is utilizing every opportunity that presents itself to bring grist to his mill. We have men who claim they make a specialty of every organ in the body; they expect and insist that we send them our patients. In various ways they have for years been instilling into the public mind the idea that it makes no difference what your trouble is you must consult a specialist. It has become such a fad a patient never hesitates to inform us that they have been examined or treated by a specialist.

We all have the greatest respect for the legitimate specialist; he has his sphere, but we should shun the pseudo kind. Were we to accede to their demands our practice would become very limited. The sphere of the surgical specialist has certainly not been evaded. The public seems to be suffering from "surgifobia," and we are aiding in perpetuating their delusion. I leave you to answer why. The true surgeon has his place and we could not if we would dispense with his services. The war is conclusively demonstrating the value of the internist and specialist, and they are indispensable in war and peace.

From our viewpoint we must wake up and conscript some of the fields that we have been and are neglecting. We must for our own and our patrons' welfare, become to some extent our own specialist. The vital statistics of this community show that there has occurred between the dates of February 7, 1916, and July, 1917, 137 deaths. It seems to me that this is a small death rate and is no reflection upon our profession, and yet after reviewing the causes of death I believe that we can very materially reduce it, especially among the aged if we will study their diseases more carefully. Apoplexy is very prevalent, and knowing that we can control and regulate the blood pressure, a great deal of good can be accomplished in its prevention. This will apply to many other conditions which are obvious. I find from experience and reading that we are making a mistake in the old practice of freely opening boils, carbuncles and felons; also in the use of various antiseptic powders in dressing wounds. More recent methods are rapidly taking their place. I shall expect a free and fearless discussion of this rambling paper, but I hope that it may do some good. If it does, I will feel amply rewarded. My plea is to urge the family physician to pay more attention, in the future, to diseases that he can treat successfully at home, thereby profiting himself as well as his patients.

SMALL HOSPITALS IN RURAL DISTRICTS, THEIR BENEFIT TO THE LAITY AND PHYSICIAN*

N. I. STEBBINS, M.D.
CLINTON, MO.

The classification of hospitals is without a doubt a desirable procedure, and it is of much importance that we put forth our greatest effort in adopting rules and regulations such as will prove the greatest good for the greatest number of those who may become associated with these institutions, either as patients requiring treatment or as physicians desiring to become more proficient and add more science to the profession. While I expect to criticize some of the suggestions that have been made and laws that now exist regarding the requirements of the state board, I wish to do so in keeping with the above statement.

I am positive that the roentgen ray, microscope and laboratory procedure cannot be overestimated when it comes to aiding in the diagnosis. But why should this be left entirely to the man in the large city? My judgment directs me to believe that we have physicians with just as much ability in the rural districts as we have in the cities. However, this ability is pent up owing to the lack of opportunity and training which the hospital affords, and with this privilege at their command they will eventually become as proficient as their brother in the city. Furthermore, I fail to understand why we cannot have just as good equipment in a hospital of fifteen to thirty beds, as they may have for a hospital of 250 beds. I believe the small hospital can have a sufficient staff and do the same research work and have the same diagnostic privileges as the large hospital. I believe that no hospital is better than the staff of physicians behind it, and the size of the hospital will have no influence on the class of work that is done, the larger institutions being obliged to increase the staff in numbers, as the number of patients may increase. The small hospitals throughout rural districts will positively encourage and make it possible for the physicians associated with the same to confine their work to a smaller field and become more proficient in the special line of work they select.

This is a day of specialization. The country physician has no chance to specialize because he cannot concentrate his work, which may be accomplished by the use of hospitals, and can never be brought about until hospitals become more popular throughout the country and the people educated to use them.

* Read at the First Annual Meeting of the Missouri State Medical Association, Jefferson City, May 6-8, 1918.

According to Dr. John A Hornsby, there are 8,667 hospitals in the United States, having a total of 875,877 beds, or a little over 100 beds to the hospital. He states that in New York City there is one hospital bed to every 130 people. In the state of Ohio there is one hospital bed to 250 people, and in Texas there is one to 450 people.

Statistics show that during the week ending March 30, 1918, there were four deaths to every 10,000 people in New York. In Ohio there were three and one-half deaths to every 10,000 people, while in Texas about two and one-half deaths to that number. If we take New York City as an example, we find that the central states are about 35 per cent. deficient in their hospital bed supply, while in the extreme west they are much more deficient.

I claim it is just as important that the sick be treated in hospitals in the Middle West and western part of the United States as in the East, and that small hospitals should be established throughout the country in large numbers and the people encouraged to use them. In this way a regular staff for each hospital may be permitted to specialize in the country, giving the laity the benefit of the specialist without compelling them to travel for many miles in order to obtain the judgment of a physician trained along certain lines or capable of diagnosing certain conditions.

My criticism of the laws now governing hospitals where nurses are trained and the requirements of the state board is that they have a tendency to protect the large institutions, and not only discourage the small ones but render it impossible to operate a training school for nurses, which I wish to say in my judgment is a gross error, as some of the best nurses in practice today are the products of small institutions, and I question if many of the small institutions are not doing better work in training nurses and making them more efficient than some of the large hospitals are doing. Nurses in large training schools are subjected to a military grind, which has a tendency to harden the student's nature and render them unfit for the sickroom.

I have been informed by careful investigation that one of our largest training schools, and one that ranks high in class, has required a single night nurse to care for about thirty patients, consisting of obstetrical, gynecological and medical cases, and in addition to this the nurse had the entire care of about ten babies ranging from one to fourteen days old. Think of a nurse trying to give a sponge bath to a

typhoid case and assist a doctor in an obstetric case at the same time!

In the small hospitals there is a smaller number of patients to the number of nurses in attendance. They have many special cases while in training and have the privilege of giving individual attention to cases that may be of interest.

Recently while visiting a large institution, and listening to the conversation of one of the greatest surgeons of the day, I observed that his whole conversation showed an inclination to annihilate the small hospital, and I wish to say that he would do more good in the world by spending his energy in improving the technic of the larger training schools and suggesting to his weaker brother things that would bring about better conditions for all concerned.

I believe that today hospital work is in its infancy, and that my plan of infiltrating the rural districts with small hospitals is not intended to in any way molest the work now being carried on in the large institutions in the city. They will always be needed, but there should be a great increase in the amount of hospital work. This increase cannot be brought about immediately, but at this time hospital beds should be as great in proportion in the Middle States and West as they now exist in the East, and a proper effort put forth by the physicians would result in these beds being supplied with patients. Should this be accomplished, and I believe the day is coming when it will, the medical profession will become much more proficient. They will learn to work together in harmony in the rural districts and great good may be accomplished.

At one time while arranging to establish a hospital I called on a physician in a neighboring town and talked to him of the benefits that might be had by associating his practice with a hospital that was efficient in its management. His reply was "that he had practiced in that locality for twenty years and had never seen a case that needed a hospital or a surgical operation that could not be done in the home." I made no reply to this erring brother, but I thought to myself, much water passes by the mill which the miller knows not of.

I hope and trust that to the medical profession a time will come when they will realize that if a hospital is good for one physician, it is equally as good for all. Let us look forward to that day when we can appreciate the admonition which we have heard so many times: "We are not divided, all one body we; one in faith and doctrine, one in charity."

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NOVEMBER, 1918

EDITORIALS

NO RELIABLE INFLUENZA VACCINE

The epidemic of influenza brought with it the epidemic of cures and preventions, most of them offered through the medium of newspapers, but there was a conspicuous absence of measures having a scientific basis to cure or prevent the disease. Hygienic rules rigidly enforced, the liberal use of antiseptics in the home, public buildings, and conveyances; and the closing of schools, churches, theaters, and movies, undoubtedly kept the epidemic from becoming more severe than it was, in Missouri. Efforts to produce a vaccine against influenza were discouraging. According to the *Journal of the American Medical Association*, Commissioner E. R. Kelly appointed two committees to investigate the value of influenza vaccine as a preventive agent and as a treatment of the disease. "The first committee, a special board for scientific investigation, consisting of Dr. M. J. Rosenau, chairman, and Frederick P. Gay and George W. McCoy, was appointed to consider the evidence available on the prophylactic and therapeutic use of vaccines against influenza. This committee presented the following conclusions:

1. The evidence at hand affords no trustworthy basis for regarding prophylactic vaccination against influenza as of value in preventing the spread of the disease, or of reducing its severity. The evidence from the present epidemic, though meager, suggests that the incidence of the disease among the vaccinated is smaller than among the nonvaccinated. The board, therefore, concludes that further experimental evidence should be collected.

2. The evidence at hand convinces the board that the vaccines we have considered have no specific value, in the treatment of influenza.

3. There is evidence that no unfavorable results have followed the use of the vaccines.

The second committee, known as the Special Board of Statistical Investigation, consisted of Dr. George C. Whipple, chairman, William H. Davis and F. C. Crum. This committee reported:

1. The weight of such statistical evidence as we have been able to accumulate indicates that the use of the influenza vaccine which we have investigated is without therapeutic benefit. Exceptional cases where apparent benefit has resulted from the use of the

vaccine can be matched by other cases where similar recoveries have been made without vaccination.

2. The statistical evidence, as far as it goes, indicates a probability that the use of this influenza vaccine has some prophylactic value.

3. There is also some evidence to the effect that other methods of protection, such as open-air treatment and the use of proper masks, are effective in protecting exposed attendants, and the use of vaccine should not be taken as an excuse for omitting such safeguards.

As a result, the following recommendations were made:

That the state encourage the distribution of influenza vaccine intended for prophylactic use, but in such manner as will secure scientific evidence of the possible value of the agent. The use of such vaccine is to be regarded as experimental.

That the state shall neither furnish nor endorse any vaccine at present in use for the treatment of influenza.

These reports are conservative, and offer to other health commissioners and their communities a reliable guide as to procedures that should be adopted before subjecting or trying out on the public any method of prevention or treatment that may be offered. These matters are the domain of medical science, and medical scientists of recognized ability should be called on to make the decision."

In a later number, *The Journal of the American Medical Association*, said the principle of the serum treatment is rational and the results reported in influenzal pneumonia appeared promising, but cautioned that further trial under proper conditions was warranted, and therefore the expectations as to what may be accomplished by this method must be kept within reasonable bounds. In concluding the article, *The Journal* remarks: "There is, therefore, no basis on which promise of protection from vaccines may be made. They may be harmless and they may or may not be of preventive value."

From the very beginning of the epidemic the United States Public Health Service had used all its facilities to produce a vaccine against influenza, and had scrutinized every such attempt by private agencies, but discovered nothing with sufficient merit to gain the endorsement of the Surgeon-General. A few days after *The Journal of the American Medical Association* made the announcement quoted above, Surgeon-General Blue gave the press a statement declaring that there was no specific remedy for influenza and that the vaccines had not proved efficacious. The statement reads:

"Several different vaccines are being tried. The reports received do not permit any conclusion whatsoever regarding the efficacy of these vaccines or their relative merits. The Public Health Service is watching the experiments carefully, but is not urging any form of vaccine treatment.

"The Health Service urges the public to remember that there is no specific cure for influenza, and that many of the alleged 'cures' and remedies being recommended by neighbors, nostrum venders and others do more harm than good. The chief reliance must be on medical attention, good nursing, fresh air, nutritious food, plenty of water and cheerful surroundings."

OLEOMARGARINE

The superstitious prejudice against the use of butter substitutes has been disappearing gradually and the knowledge that oleomargarine is a nutritious, healthful and palatable form of butter substitute was beginning to be appreciated by the people before the great war drew attention to every form of food and its conservation. There are laws, passed in the dark days of ignorance regarding the real value of the fats prepared in the form of oleomargarine; there are taxes on it, which should be abolished, for it is manifestly unfair to impose such handicaps upon a food that is so well fitted to take the place of butter among the class of people that cannot pay the higher prices now demanded for that dairy product.

In referring to this tax on oleomargarine the *New York Times* not long ago said that the reason for it was simply because the dairymen wanted it to be so, although "they never have been able to deny that oleomargarine is as wholesome and nutritious as their own product." The ban upon oleomargarine should also be removed from public institutions, some of which prohibit the purchase of oleomargarine as a substitute for butter for the use of the inmates. Such a course is in direct opposition to the policy that ought to govern public institutions, because it requires the expenditure of unnecessarily large sums of money for an article that can be, at least partially, dispensed with and its place filled by a satisfactory substitute at much lower cost.

Not long ago the Health Commissioner of New York City advocated that the state legislature of New York should remove the restrictions which prevented the public institutions from purchasing butterine and oleomargarine, and stated that this matter should be left to the discretionary powers of the officials in charge of the institutions. "Such action," he said, "would accrue to the benefit of the taxpayers without detriment to the inmates of the public institutions."

It is not likely that those who advocated a tax on oleomargarine will be able to sustain their arguments successfully much longer, for the rapid increase in the consumption of oleo-

margarine will force the removal of needlessly burdensome taxes and prohibitions of its use in state institutions. During the past year there has been an increased demand for oleomargarine representing an output of nearly 235,000,000 pounds. "If the legitimate substitutes for butter were allowed to come into the general use for which they are qualified," says the *Journal of the American Medical Association*, "not only would a reduction of living expenses become possible thereby, but also the price of milk and cream ought to be decreased below the rapidly approaching prohibitive point."

In feeding our soldiers the Government is scrutinizing every phase of the manufacture and preparation of foodstuffs, so that the defenders of the country shall have wholesome and nutritious food made from the purest and best materials. It is notable that in the purchase of butter and butter substitutes, oleomargarine was supplied to the amount of 700,000 pounds, while the amount of butter purchased was 1,250,000 pounds. As the season advances when butter becomes scarce it is estimated that the amount of oleomargarine purchased will be increased until it will equal the amount of butter. There should be early action to remove all vestige of prejudice and unjust discrimination against oleomargarine so that it may take its legitimate place among food products as a healthful and nutritious diet.

THE ANTITUBERCULOSIS CONFERENCE

The sixth annual convention of the Mississippi Valley Conference on Tuberculosis was held in St. Louis, October 2, 3, and 4—the war convention of the conference—proved to be one of the most valuable meetings that tuberculosis workers in this section ever attended. Big problems confronting the various local tuberculosis associations were discussed by men and women who had met and tried to solve them—in some instances *had* solved them—and situations were very greatly clarified by the general discussions. New problems, problems of the greatest possible immediate urgency, which have come as a result of the war, also were presented, and plans for their solution were formulated. In short, from the beginning to the end of the three day meeting every moment was of value to some part of the great antituberculosis work of the Mississippi Valley.

Thirteen states were represented in the convention. Illinois carried off the palm in the size of its delegation, with Indiana and Missouri running close for second place. Some of the

eminent men scheduled to present papers were prevented from attending because they were held at their posts by the influenza epidemic, then at its height in the training camps, but their places were very ably filled by others. Dr. W. Frank Persons, director general of civilian relief of the American Red Cross, who was to head the program in the joint conference of Red Cross and tuberculosis workers in one of the most important sessions of the convention, did get to St. Louis, but he had been there only a few hours when he was called back to Washington to take charge of the Red Cross fight against influenza.

Dr. Ethan A. Gray of Chicago, and Capt. Kennon Dunham, U. S. Army, of the Army General Hospital at Biltmore, N. C., were two "headliners" who could not attend, but their work was very ably done by two St. Louis physicians. Dr. J. J. Singer made the roentgen-ray demonstration in the model clinic at Barnes Hospital amphitheater, which Captain Dunham was to have done, and Dr. A. E. Taussig performed the artificial pneumothorax operation which Dr. Gray was expected to do. The clinical session was pronounced by many of the delegates to be the most worth-while event of the conference.

OBITUARY

SYLVESTER E. DOSS, M.D.

Dr. S. E. Doss of Wyaconda, a graduate of the Keokuk College of Physicians and Surgeons, 1888, died at his home Oct. 4, 1918, from heart disease, age 56. Dr. Doss was a member of the Clark County Medical Society and the State Medical Association. His health began to fail about last June, and he never regained his strength. He was a member of the Medical Advisory Board, and took an active part in all this work. Locating in Wyaconda for practice, he spent his entire professional career in the town and vicinity except nine months spent in Rutledge, Mo.

He was married to Mrs. Lizzie Weber on Nov. 23, 1890. To this union one daughter, Sylvia, was born. Besides his devoted wife and daughter he leaves two stepchildren, Otho Weber and Mrs. Joe Boley, to whom he was a real father, caring for them and giving them that wise counsel that was characteristic of his life.

He was loved by his friends, honored by all physicians, and was an ornament to his profession. He was a hard student, a conscientious practitioner of his art, and attained no small measure of success in his chosen calling.

JOHN L. BURKE, M.D.

Dr. John L. Burke, Laclede, Mo., one of the oldest members of our Association, died at his home, June 20, 1918, from chronic interstitial nephritis. Dr. Burke was one of the most esteemed members of our organization, loved and revered by a large host of physicians and the people of Linn and the surrounding counties. For several years he had been compelled to retire from active work on account of failing health. He was born in Morgantown, Kentucky, Jan. 1, 1847, and was a veteran of the Civil War. In 1865 he came to Missouri and the family first settled in Livingston county. His father was a physician, and under his direction and guidance Dr. Burke studied and practiced, as they did in the old days, before he obtained his diploma. He entered the Missouri Medical College and in 1881 was graduated. He then located in Laclede where he remained in active practice. He was one of the most faithful members of the county and state medical association, and rarely failed to attend the annual meetings while his health permitted. His loss is one that the Association feels, and all the people in Linn mourn a faithful physician and a sympathetic friend. He is survived by his wife and two sons, one of whom is Dr. W. Foster Burke of Laclede, and a daughter.

NEWTON E. SMITH, M.D.

Dr. N. E. Smith of Fayette, a graduate of the Washington University Medical School, died at his home Oct. 12, 1918, from pneumonia, following influenza, age 38. Dr. Smith was a member of the Howard County Medical Society, the State Medical Association and a Fellow of the American Medical Association. He was chairman of the Board of Censors at the time of his death and was one of the most active and useful members of the profession. Endowed by nature with the spirit of self sacrifice and service he endeared himself to a host of friends and patients throughout the territory in which he lived, where his death would have been a serious loss at any time but is now a grievous disaster. Dr. Smith was an earnest student of medical progress and made himself master of every new and useful measure that promised relief to the sick and afflicted. He was honored and esteemed by all men and gave himself freely to the work of advancing the best interest of the community in which he lived. As a member of the county medical society and the State Medical Association he served the organization in every way that he could and ever maintained the ideals and principles of the profession. His readiness to serve probably led to the fatal attack of pneumonia, for he yielded to the calls of the sick before he had entirely re-

covered his strength and vitality, despite the advice of friends that he remain at home until well. The Howard County Medical Society adopted the following resolutions in memory of their deceased member;

WHEREAS, The Great Physician has called from earth our brother Dr. N. E. Smith, and

WHEREAS, We are deprived of his companionship and council; therefore be it

Resolved, That we mourn his loss; yet we recognize the supreme will of Him that doeth all things well.

Resolved, By the Howard County Medical Society: First, that in the death of Dr. Newton Elliott Smith, this society has lost a valued member, the chairman of the Board of Censors, who was always ready to administer lovingly and tenderly to the sick and relieve the distressed. Second, that we extend to the bereaved wife and children our sympathy and love knowing they will be comforted by his God and the heritage of the beautiful Christian life of the one who has only gone before. Third, that a copy of these resolutions be spread upon the minutes of this Association, and a copy each be furnished to the Missouri State Medical Journal and the bereaved wife, and published in the Fayette papers.

A. W. MOORE,
C. H. LEE,
W. B. KITCHEN,
THOS. PAYNE, Vice-president,
C. W. WATTS, Secretary,
The Committee.

NEWS NOTES

DR. H. L. WOLFNER of St. Louis has been elected president of the St. Louis Board of Education.

ABOUT October 25 the United States Public Health Service took charge of the work of combating the influenza epidemic, and Surgeon-General Blue invited the cooperation of physicians who could give some of their time to this work.

THE president of our Association, Dr. M. P. Overholser, of Harrisonville, has been quite ill with a carbuncle followed by septicemia which compelled him to spend several weeks in a hospital in Kansas City. He is now at home and convalescing satisfactorily.

DR. ROLLA H. HENRY, chief physician at the St. Louis City Dispensary, has been appointed superintendent of the St. Louis City Hospital to fill the vacancy caused by the resignation of Dr. J. A. Pringle, who has accepted a commission in the Medical Corps of the Army. Dr. Walter Rohlfing succeeds Dr. Henry as chief of the staff at the City Dispensary.

DR. GEORGE W. CARPENTER of Utica, president of the Livingston County Medical Society, was the guest of honor at a meeting of the members of the county medical society recently when a farewell party was tendered him. He is a lieutenant in the Medical Corps of the Army and stationed at Fort Riley. In his absence Dr. A. Collier of Avalon will act as president.

DR. O. H. CAMPBELL, a member of the St. Louis Medical Society, now in the Medical Corps of the Army, has been promoted from major to lieutenant-colonel. Colonel Campbell has recently arrived in France and is attached to Base Hospital 87. Others who have been advanced to the rank of lieutenant-colonel are: Drs. Fred T. Murphy, V. P. Blair, M. G. Seelig, all of St. Louis.

COLONEL EDWARD L. MUNSON, for twenty-five years an officer of the Medical Corps, U. S. A., has been promoted to the rank of brigadier-general, and with the promotion selected for duty on the general staff. The new commission is in the line of the army. General Munson is the third medical officer of the army to be given general officer's rank for duty outside the Medical Department of the Army, the previous appointees being Generals Ainsworth and Leonard Wood.

At the annual meeting of the State Board of Health, January 16, Dr. W. A. Clark, Jefferson City, was elected president; Dr. A. W. McAlester, Columbia, vice-president, and Dr. George H. Jones re-elected secretary. The board reviewed the conditions throughout the state caused by the epidemic of influenza and decided that the precautionary measures that had been instituted should be continued for an indefinite period.

The board has withdrawn its recognition of the St. Louis College of Physicians and Surgeons.

MAJOR-GENERAL GORGAS, Surgeon-General of the Army, was retired when he reached the age limit in October last, but was immediately recalled to active duty with the same rank. He will complete the inspection of medical conditions in France and England, on which work he was engaged when he reached the retiring age, and will then return to the United States. It is announced that his next assignment may take him to Italy. Major-General M. W. Ireland has been nominated for the position of Surgeon-General of the Army and has returned to the United States to assume the duties of that office.

THE War Department will take over the St. Louis City Sanitarium and convert it into a reconstruction hospital for soldiers living in this section of the country, who have been wounded and require reeducation to restore them to productive citizens. The building will be arranged to care for 3,000 men exclusive of the medical and nursing staffs. Lieut.-Col. John A. Hornsby and Major L. H. Lewis of the Medical Corps of the Army visited St. Louis recently and arranged with the city officials to turn the building over to the government. The patients at the sanitarium will be placed in other buildings belonging to the city or rented for the purpose. The medical staff of the hospital will be drawn from the Medical Corps of the Army. The site of the City Sanitarium is one of the most satisfactory locations for a reconstruction hospital.

DURING September the following articles were accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Non-proprietary Articles: Benzyl Alcohol.

Armour and Company: Corpus Luteum Capsules, 2 grains; Thromboplastin Solution-Armour.

Gilliland Laboratories: Antipneumococcus Serum, Type I.

Hynson, Westcott and Dunning: Phenmethylol-H. W. and D.; Phenmethylol Ampules, 1 per cent., H. W. and D.; Phenmethylol Ampules, 2 per cent., H. W. and D.; Phenmethylol Ampules, 4 per cent., H. W. and D.

Riedel and Company: Salipyrine Tablets, 7½ grains.

E. R. Squibb and Sons: Chlorcosane-Squibb; Halazone-Squibb Tablets, ¼₁₆ grain; Solar-gentum-Squibb.

DURING October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Non-official Remedies:

Hynson, Westcott and Dunning: Lutein Tablets, H. W. and D., 2 grains.

Eli Lilly and Company: Pneumococcus Antigen (Rosenow), Lilly.

MEMBERSHIP CHANGES, OCTOBER

NEW MEMBERS

Andruss, Edward, Holden.

Clark, Samuel M., Mt. Vernon.

Gilkeson, Hugh P., Warrensburg.

Kelly, William, La Due.

Ockerblad, Nelse F., Kansas City, by transfer from Wyandotte County, Kan.

Payne, Bryan T., Lexington.

Sandfos, Frank, Ballwin.

Sanford, Silas M., Palmyra.

Zuppann, Chas., Ballwin.

CHANGES OF ADDRESS

Albers, Ed., 636 Lathrop Bldg., Kansas City, to 4025 Main.

Berry, Fred R., 428 Altman Bldg., Kansas City, to 501 Lillis Bldg.

Farrington, F. B., Greentop, Mo., to 662 South Franklin, Kirksville.

Frame, Homer Glenn, Mountain Grove, Mo., to Republic, Mo.

Hyder, Ira F., Excelsior Springs, Mo., to Lamar, Colo.

Meador, Adolph A., Belleview, Mo., to Flat River.

Miller, Leslie B., 423 Altman Bldg., Kansas City, to 808 E. 44th St.

O'Malley, W. F., Clayton, Mo., to 6209 Etzel, St. Louis, Mo.

Peller, Edwin C., Lowry City, to 410 S. Main St., Clinton, Mo.

Scholtz, Paul C., Colonial Bldg., St. Louis, to University Club Bldg.

Shank, W. L., Chicago, Ill., to Shabbona, Ill.

TRANSFERRED

Luckey, F. S., Festus, to Casper, Wyo.

DIED

Doss, Sylvester E., Wyaconda.

Farrow, George W., Kansas City.

Gifford, A. H., Springfield.

Miller, Wm. Glenn, Morrisville.

Smith, Newton Elliott, Fayette.

MISCELLANY

GOOD IN PEACE ALSO

No doubt the promptness with which the House adopted the resolution authorizing the expenditure of \$1,000,000 in combating the spread of influenza, which is now threatening to overrun the country, was due to the importance of the emergency in a military way. It is conceivable that the epidemic may check the steady flow of troops to France, but if there were no war the appropriation would be fully justified.

The great epidemics of grippe which have visited the United States, when viewed simply in their economic aspect, proved as costly as war. Workers by the tens of thousands were compelled to cease their work, and while the disease is not ordinarily serious, it kills enough to make an appalling total because of the enormous number of those who are attacked.

Should the preventive measures applied in the present emergency prove effective in restricting the disease, it is a safe guess that Congress will not need the stimulation of another war to open the purse strings wide for the health officer when another invasion of influenza appears.—St. Louis *Republic*.

SURGEON-GENERAL MERRITTE W. IRELAND

On October 3 the President sent to the Senate the following nomination: "To be Surgeon-General with the rank of Major-General: Major-General Merritte W. Ireland, M. C., U. S. Army." It may be taken for granted that this nomination will be confirmed by the Senate. The appointment of General Ireland to this position will give general satisfaction to the Medical Department of the Army. The record of General Ireland in the Medical Department is a record of thorough, conscientious service fitting him particularly for the position which he is now to occupy.

He was born at Columbia City, Ind., May 31, 1867.

mand to the Philippine Islands, serving in several campaigns and being officially commended by the chief surgeon. In April, 1900, he took charge of the medical supply depot of the Division of the Philippines at Manila, and was honorably discharged from volunteer service, June 30, 1900. In 1902 he entered the Surgeon-General's Office, working under Surgeon-General O'Reilly and continuing under Surgeon-General Torney. He was promoted to major and surgeon and to major, M. C., Aug. 3, 1903, and to lieutenant-colonel, May 1, 1911. He left the office of the Surgeon-General in 1912, again going to the Philippines, where he was stationed as post surgeon at Fort William McKinley. He thus had a continuous



SURGEON-GENERAL MERRITTE W. IRELAND

was graduated from the Detroit College of Medicine in 1890, and followed his graduation with an internship in St. Mary's Hospital, Detroit, from 1889 to 1890; was graduated from Jefferson Medical College, Philadelphia, in 1891, immediately afterward entering the service as first lieutenant and assistant surgeon on May 4, 1891. He began his military career at Jefferson Barracks, Mo., on May 27, 1891; on May 4, 1896, he was made captain and assistant surgeon. In the Spanish-American War he served with the Fifth Army Corps in Cuba and later at Camp Wyckoff, N. Y., on April 17, 1899, becoming surgeon with the rank of major of the 45th United States Infantry. At this time he went with his com-

service in the Surgeon-General's Office of approximately ten years. He returned to the United States and was placed in charge of the base hospital at Fort Sam Houston in 1916, and accompanied General Pershing to Mexico as surgeon of the American Expeditionary Forces to Mexico. When the United States entered the great war he accompanied General Pershing to France as chief surgeon of the American Expeditionary Forces, was promoted to the rank of brigadier-general, May 1, 1918, and more recently to the rank of major-general and Surgeon-General of the expeditionary forces.

Our new Surgeon-General is, therefore, fitted especially to conduct the medical service of the Army

through the remainder of the war, as well as in times of peace. He has filled practically every position to which the men who will serve under him may be called—surgeon of volunteers, post surgeon, assistant in the Surgeon-General's Office, supply depot, surgeon-general of the expeditionary forces—a complete record which indicates that the chief will know what confronts each of his subordinates.—*Jour. Am. Med. Assn.*

**BRIGADIER-GENERAL NOBLE TO BE
SURGEON-GENERAL FOR EXPE-
DITIONARY FORCES**

Included with the nominations sent to the Senate by the President, October 3, was the appointment of Brig.-Gen. Robert E. Noble to take the place vacated

the Canal Zone and was efficient in helping to secure the wonderful sanitary results which made the building of the Panama Canal possible. When General Gorgas was made Surgeon-General, Major Noble accompanied him to the Surgeon-General's Office, taking over the personnel department. As chief of the personnel division he was instrumental in building up the large personnel of the Medical Reserve Corps which today constitutes the large majority of the commissioned portion of our Medical Department. Later, in addition to his other duties, he was called to assume the duties of director of hospitals on this side of the Atlantic, and at the time of his present appointment was engaged in completing arrangements for the care of the sick and wounded who are to be returned from Europe, or who may need hospital care in the United States. This is the fundamental work



MAJOR-GENERAL ROBERT E. NOBLE

by General Ireland as Surgeon-General for the American Expeditionary Forces. General Noble was born in Georgia in 1870. He was educated in the Polytechnic Institute of Alabama, receiving his B.S. degree in 1890 and the M.S. in 1891 and was graduated in medicine by Columbia University in 1899. He was appointed assistant surgeon in 1901, and was an honor graduate of the Army Medical School in 1904, then was appointed captain and assistant surgeon in the Medical Corps, June, 1906, and major in January, 1910. From 1907 to 1914 he served with General Gorgas in

the Department of Reconstruction and Rehabilitation.

General Noble has had a wide experience in sanitation, and as assistant Surgeon-General is thoroughly acquainted with the administrative work of the Surgeon-General's Office which will be helpful in his new position. In every respect he is well qualified for the new functions and responsibilities he will assume in France as head of the Medical Division of our Expeditionary Forces.—*Jour. Am. Med. Assn.*

COMMISSIONS ACCEPTED IN THE MEDICAL
CORPS OF THE ARMY AND NAVY RE-
SERVE FORCE BY PHYSICIANS IN
MISSOURI FROM SEPTEMBER 21
TO OCTOBER 19, INCLUSIVE

Albers, E. A., Kansas City; Allder, A. E., Cane Hill; Atwood, W. G., Carrollton.

Barnum, K. R., Sedalia; Bedford, S. V., Jefferson City; Benson, B. G., St. Louis; Blackmore, T. A., Windsor; Boehm, J. D., Monett; Boyd, J. W., Sarcocix; Breyfogle, H. A., Kansas City; Bridges, J. R., Kahoka; Bryan, H., Carthage; Bryant, C. H., Kansas City.

Caldwell, J. C., Laclede; Campbell, A. J., Sedalia; Cole, P. F., Ewing; Coleman, H. T., Pattonville; Cra-ven, Y. D., Excelsior Springs.

Daley, L. M., Hamilton; Davis, F. L., St. Louis; Dean, J. M., St. Louis; De Honey, F. R., Fredericktown; Dorsheimer, G. V., Kansas City; Dwyer, F., Sedalia; Dyer, D. P., Sedalia.

Eure, J. B., Poplar Bluff; Finley, F. L., East Prairie; Fitzporter, A. L., St. Louis; Forster, O. E., St. Louis.

Gaylor, W. C., St. Louis; Gettys, H. B., St. Louis; Gibbs, C. A., Greensburg; Gifford, A. W., Springfield; Green, L. B., Kansas City; Gregg, C. P., St. Louis.

Hansen, W. J., St. Joseph; Hanser, H. A., St. Louis; Happel, H. E., St. Louis; Harnagel, F. H., St. Louis; Hartman, J. A., St. Louis; Hawkins, G. W., Salisbury; Hearst, A. L., Kansas City; Hickerson, J. T., Centralia; Homan, J. S., St. Louis; Hughart, H. H., St. Louis; Hughes, A. J., St. Louis; Hunt, W. J., St. Joseph.

Jeude, J. J., St. Louis.

Kelly, B. B., Purdy; Kelly, R. B., Savannah; Kennedy, W. U., St. Louis; Kieffer, V. B., St. Louis.

Lamar, F. C., Kansas City (Navy); Lane, H. H., Kansas City; Lombard, H. L., Bridgton; Lyter, J. C., St. Louis.

Malone, J. T., St. Louis; McDonald, J. W., St. Louis; McHaffie, C. H., Ash Grove; McKellops, L. G., St. Louis; McLennan, T. A., Marshall; Miller, H. B., St. Louis; Mills, J. W., Owensville; Minton, W. H., St. Joseph; Mitchell, G. B., Bronson; Monday, L. R., Richland; Monroe, L. E., Bonne Terre.

Orr, T. G., Kansas City.

Perry, D. C., Mound City.

Reim, W. H., St. Louis; Riggs, J. M., Wayland; Robinson, D. B., Kansas City; Roseberry, E. M., Neosho; Rothman, L., St. Louis (Navy).

Sample, W. D., Flat River; Schwartz, F. C., St. Louis; Seibert, D. A., Washington; Slaughter, S. C., Fredericktown; Stratton, C. S., Roscoe.

Tate, P. S., Farmington; Thompson, D. A., St. Louis; Tilles, R. S., St. Louis.

Van Allen, J. P., Cole Camp; Vaughn, S. C., Hurricane.

Wattenberg, J. E., Kansas City; Welch, G. N., St. Charles; Wilbur, H. L., Granby; Wilhite, G. O., St. Louis; Williams, J. H., Hume; Wright, C. G., St. Louis.

SEEING IS HEARING

The Army Is Educating Its First Deaf Soldier by
the Newest Methods

"After all," said Private Isadore Warshoevsky of the Eleventh Engineers, "I might have been deaf even if I hadn't gone to war, and then nobody would have cared, so I guess I'm pretty lucky at that."

The "luck" referred to by Private Warshoevsky is due to the fact that he has sacrificed his hearing for an education. He is the first deaf soldier to be returned from the American Expeditionary Forces to the United States after his turn in the field.

Warshoevsky started at Camp Upton, and his regiment was one of the pioneers of the National Army to go overseas. His hearing was not normal at the time, but his heart was, and he wanted to make his own fight for the land of his adoption. When opportunity came he took it and, although he left his hearing over there, he brought back with him an enthusiasm and determination that are going to more than make up for a loss that is being rapidly turned from a liability into an asset.

There is something of a romance in the story of Warshoevsky. Twenty-five years ago he was born in Russia near Kiev. He saw his relatives robbed, persecuted and murdered in the riots of 1904 and 1905. As a child he felt the pinch of hunger. He was browbeaten and kicked. When he was 10 years old his father sought a refuge in America, but young Isadore stayed with his mother—an invalid. She died, never knowing freedom. The one happy memory of those days is that he once saw in Kiev the little grandmother of the Russian Revolution, the great Katerina Breshkovsky, and heard her speak. The dream of some day living in a republic was born in his soul.

At 15, after his mother's death, Isadore managed to make his way with fifty other immigrants to America; but meanwhile his father had married again and he was thrown entirely on his own resources. He became an errand boy, working from 7 in the morning until 6 at night to earn \$2.50 a week. He had heard much of the opportunities in America and how even the humblest people could read and write.

So he enrolled in a night school, but when he came home after work he was so tired that he would fall asleep at his supper. From the errand boy job he moved up, and at 20 was an apprentice in a shoeshop, earning \$8 a week; but four years later he was a shoe stitchee, and every Saturday night they handed him \$25. Then war came.

After he entered the service Warshoevsky married a Russian girl living in Brooklyn. He does not say much about this, but there is a suspicion that she has something to do with his eagerness to learn. He arrived in Ellis Island in July, handicapped by deafness, unable to read or write further than to recognize the letters of the alphabet and to form some of them.

It is on such a foundation that the officers and teachers at U. S. Army General Hospital No. 11, Cape May, N. J., where Warshoevsky was sent, went to work. They decided to teach him the phonetic method. What he had learned previously did not help much. But his mind was made up, and he was eager to move. At the end of the first week he was able to write a letter to his wife and to write simple sentences and to read newspaper headlines. A few days later he wrote this letter to an uncle and aunt and was helped only on four words:

"Dear Uncle and Aunt: I can write you that I received your letter last week. Forgive me for not writing sooner. I am well today. I hope that you are well. Now I can write you about me. I am going to school every day. I am learning to write and read and read the lips, so you will not yell at me. When I can read the lips I will come and see you. Write to me soon. From your nephew,
ISADORE."

The intricacies of written English are puzzling to Isadore. He was told that each sentence should begin with a capital letter.

"Why," he asked, "should I make the big letter? I am not blind."

Private Warshoevsky is still a soldier with a clean record, of which he is very proud, and he does what he is told. His progress in speech reading has been

most satisfactory, and within a few months he will be sent back to his little home—back to his shoe stitching bench, a better American and a more valuable citizen than when his country called him.

Other men like Warshoevsky are arriving at Cape May. There, under the direction of Lieut.-Col. Charles W. Richardson, they will be taught to read speech from the lips, to learn, if necessary, to read and to write. Each will be given his chance and each will make good. Private Warshoevsky can write that now.—*Carry On.*

**ORDERS TO MISSOURI PHYSICIANS IN THE
MEDICAL CORPS OF THE ARMY FROM
SEPTEMBER 21 TO OCTOBER 19,
INCLUSIVE**

Armstrong, Lieut. J. H., Kirkwood, to Fort Riley, base hospital, from Fort Sill.

Ayars, Capt. T. R., St. Louis, to Camp Custer, Mich., as sanitary inspector, from Camp Pike.

Baird, Capt. J. E., Excelsior Springs, to Fort Oglethorpe, for instruction.

Barnum, Lieut. K. R., Sedalia, to Biltmore, N. C., from Fort Oglethorpe.

Benham, Lieut. C. E., Tarkio, to Camp Logan, Texas, from Fort Riley.

Behrens, Capt. L. H., St. Louis, to Camp Gordon, Ga., base hospital, has been revoked.

Blacklock, Capt. D. E., King City, to Fort Riley, for instruction.

Boehm, Lieut. J. D., Monett, to Camp A. A. Humphreys, Va., base hospital, for instruction, from Fort Oglethorpe.

Bokhof, Capt. D. H., Kansas City, to Fort Wayne, Mich.

Boone, Capt. J. C., Charleston, to Camp Beauregard, La., base hospital, from Camp Sheridan.

Bradford, Lieut. O. F., Columbia, to Camp Abraham Eustis, Va., camp hospital, from Army Medical School.

Bradley, Capt. E. H., Springfield, honorably discharged on account of physical disability existing prior to entrance in the service.

Brickey, Lieut. P. A., St. Louis, to Camp Sherman, Ohio, base hospital, from Camp Beauregard.

Bryan, Major R. S., St. Louis, to Camp Lewis, Wash., from Camp Kearney.

Buhman, Capt. R., St. Louis, to New Haven, Conn., Yale Army Laboratory School, from Army Medical School.

Campbell, Lieut. A. J., Sedalia, to Camp Pike, Ark., base hospital, for instruction.

Carpenter, Capt. E. H., Helena, to Camp Logan, Texas, from Fort Riley.

Cleveland, Lieut. A. H., St. Louis, to Camp Pike, Ark., evacuation hospital, from Camp Bowie.

Cohn, Lieut. A. R., Kansas City, to Camp Sheridan, Ala., for instruction.

Cole, Capt. P. F., Ewing, to Fort Oglethorpe, for instruction.

Cooper, Capt. C. L., Kansas City, to Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Camp Custer.

Creveling, Capt. H. C., St. Louis, to Camp Traxis, Texas, base hospital.

Davis, Lieut. P. C., Moberly, to Camp John Wise, Texas, from Camp Kelly.

Dean, Capt. J. M., St. Louis, to Camp Crane, Pa., from Camp Zachary Taylor.

De Menil, Lieut. H. W., St. Louis, to Fort Riley, for instruction.

Dumbauld, Capt. B. A., Webb City, to Rochester, Minn., Mayo Clinic, for instruction, and on completion to his proper station, from Camp Custer.

Elkins, Lieut. H. A., Hardin, to Camp Gordon, Ga., base hospital.

Emerson, Lieut. B. H., Stockton, to Camp Pike, Ark., from Fort Riley, has been revoked.

Fair, Lieut. S. W., Belton, to Camp Jackson, S. C., evacuation hospital, from Fort Oglethorpe.

Farme, Capt. H. G., Mountain Grove, to Fort Riley, for instruction.

Ferguson, Capt. W. J., Sedalia, to Camp Hancock, Ga., base hospital, for instruction, from Fort Oglethorpe.

Gaines, Lieut. G. W., Knoxville, to Camp Dodge, Iowa, base hospital.

Gaylor, Capt. W. C., St. Louis, to Fort Oglethorpe, for instruction.

Gerstenkern, Lieut. R. E., Kansas City, to Fort Wayne, Mich.

Glennon, Capt. W. P., St. Louis, to Camp Hancock, Ga., evacuation hospital, from Fort McPherson.

Goldberg, Lieut. D. L., St. Louis, to Camp Wadsworth, S. C., from Fort Riley.

Goldstein, Major M. A., St. Louis, to Camp Dodge, Iowa, base hospital.

Gorin, Capt. M. G., St. Louis, to Fort Oglethorpe, for instruction.

Grace, Capt. J. F., Excelsior Springs, to Fort Leavenworth, Kan., from Fort Riley.

Green, Capt. J. R., Independence, to Camp Sehidan, Ala., base hospital, for instruction, from Fort Oglethorpe.

Grim, Lieut. E. C., Kirksville, to Jefferson Barracks, Mo., base hospital, from Camp Dodge.

Haas, Lieut. F. F., St. Louis, to Camp Crane, Pa., from Camp Hancock.

Happel, Capt. H. E., St. Louis, to Camp Sevier, S. C., base hospital, for instruction, from Fort Oglethorpe.

Harnagel, Lieut. F. H., St. Louis, to Camp Logan, Texas.

Haworth, Lieut. D. B., Kansas City, to Fort Wayne, Mich., from Montgomery, Ala.

Herchenroeder, Capt. L. C., St. Louis, to Fort Oglethorpe, for instruction.

Higdon, Lieut. E. F., St. Joseph, to Camp Wheeler, Ga., from Fort Riley.

Hill, Capt. E. C., Smithville, to Camp Kearney, Calif., from Fort Riley.

Hyndman, Lieut. C. E., St. Louis, to Camp Greene, N. C., evacuation hospital, from New York.

Inman, Lieut. W. B., St. Louis, honorably discharged on account of physical disability existing prior to entrance in the service.

Jacobi, Capt. F. E., St. Louis, to Camp Pike, Ark., from Camp MacArthur.

James, Lieut. E. D., Joplin, to Fort Riley, for instruction.

James, Lieut. L. S., Blackburn, to Camp Sevier, S. C., base hospital, from Camp Logan.

Janes, Capt. V. B., Cameron, to Leon Springs, Texas, from Fort Riley.

Johnson, Capt. S. R., St. Charles, to Denver, Colo., from Fort Riley.

Kearney, Lieut. E. F., Oregon, to Camp Kearney, Calif., from Fort Riley.

Kelly, Lieut. C. A., St. Louis, to Camp Forrest, Ga.
Kennedy, Capt. W. U., St. Louis, to Camp Crane, Pa., from Camp Dix.

Klein, Lieut. W. C., Kansas City, to Camp Crane, Pa., from Camp Lewis.

Kleinshmidt, Lieut. C. C., St. Louis, to Camp Joseph E. Johnston, Fla., base hospital.

Koessel, Lieut. A. W., St. Louis, to Azalea, N. C., from Camp Bowie.

Koogler, Capt. J. F., Kansas City, to Camp Kearney, Calif., from Fort Riley.

Lewis, Lieut. B. W., St. Louis, to Camp Gordon, Ga., from Army Medical School.

Lockwood, Lieut. W. E., Potts, to Camp Logan, Texas, from Fort Riley.

Long, Capt. F. L., Farmington, to Camp Greene, N. C., base hospital, from Fort Porter.

Ludwick, Capt. A. L., Kansas City, to Camp Dick, Texas, from Mineola.

Lux, Lieut. P., Kansas City, to Camp Sherman, Ohio, base hospital, for instruction, from Fort Riley.

Lyman, Lieut. H. W., St. Louis, to Mineola, N. Y., for instruction, from St. Louis.

Lyttle, Lieut. G. C., St. Louis, to Camp Beauregard, La., base hospital, from Camp Shelby.

MacDonald, Capt. J. W., St. Louis, to Camp Beauregard, La., base hospital, from Camp Pike.

Major, Capt. H. S., Fulton, to Camp Joseph E. Johnston, Fla., to examine the command for nervous and mental diseases, from Camp Pike.

Major, Capt. R. H., Liberty, to New Haven, Conn., Yale Army Laboratory School, for instruction.

Malone, Lieut. J. T., St. Louis, to Camp Sheridan, Ala., from Fort Oglethorpe.

Margulis, Lieut. A. A., St. Louis, to Fort Oglethorpe, for instruction.

Martin, Capt. C., St. Louis, to Camp Beauregard, La., base hospital, from Fort Riley.

McCall, Capt. O. S., Wheaton, to Jefferson Barracks, Mo.

McFadden, Lieut. J. F., St. Louis, to Camp Grant, Ill., as camp psychiatrist, from Jefferson Barracks.

McGennis, Lieut. P., St. Louis, to Camp Crane, Pa., from Camp Zachary Taylor.

Mellies, Capt. G. A., St. Louis, to Camp MacArthur, Texas, base hospital, from Fort Oglethorpe.

Meyer, Capt. M. W., Columbia, to Jefferson Barracks, Mo., from Fort Oglethorpe.

Milligan, Lieut. R. H., Kearney, to Camp Gordon, Ga., base hospital.

Mills, Capt. R. F., Odessa, to Charleston, S. C., from Camp Bowie.

Moennighoff, Capt. F. J., Odessa, to New York, Bellevue Hospital, for instruction, from Fort Oglethorpe.

Monroe, Lieut. L. E., Bonne Terre, to New York, Neurological Institute for instruction, from Fort Riley.

Morris, Capt. R. H., Kansas City, to Camp Shelby, Miss., from Fort Oglethorpe, has been revoked.

Moulder, Lieut. J. D., Linn Creek, to Camp A. A. Humphreys, Va., from Fort Oglethorpe.

Muenhr, Lieut. L. O., St. Louis, to Camp Custer, Mich., base hospital, from Camp Grant.

Murphy, Lieut. J. H., St. Louis, to Camp Grant, Ill., from Army Medical School.

Newell, Lieut. Q. U., St. Louis, to Hoboken, N. J., evacuation hospital, from Camp Wadsworth.

Opie, Major E. L., St. Louis, to Camp Pike, Ark., from Fort Riley.

Outland, Major J. H., Kansas City, to Camp Custer, Mich., base hospital, for instruction.

Patterson, Capt. W. T., Hannibal, to Dansville, N. Y., from Camp McClellan.

Peden, Lieut. J. C., St. Louis, to Camp Zachary Taylor, Ky., base hospital, from Camp Morrison.

Porterfield, Capt. J. D., Jr., Cape Girardeau, to Camp Gordon, Ga., base hospital, from Camp Travis.

Potter, Lieut. J. C., St. Louis, to Camp Dodge, Iowa, base hospital.

Pryor, Lieut. H. B., Ashland, to Camp Dodge, Iowa, base hospital.

Ranson, Lieut. J. R., St. Louis, to Camp Beauregard, La., base hospital, from Camp Logan.

Rassieur, Capt. L., St. Louis, to Fort Benjamin Harrison, base hospital, from Camp Cody.

Roberts, Lieut. S. E., Kansas City, to Mineola, N. Y., Hazelhurst Field, from Dallas.

Rosenberg, Lieut. N., Kansas City, to Camp Upton, N. Y., as orthopedic surgeon, from Fort Oglethorpe.

Rudd, Capt. W. E., Salem, to Camp Logan, Texas, from Fort Riley.

Saenger, Capt. N., St. Louis, to Camp Beauregard, base hospital, from Camp Shelby.

Sauer, Capt. W. E., St. Louis, to Fort Oglethorpe, as assistant instructor.

Schlueter, Major R. E., St. Louis, to Camp Custer, Mich., for instruction, in the base hospital, and on completion to his proper station, from Camp Hancock.

Senseney, Capt. E. T., St. Louis, to Fort Sheridan, Ill., base hospital, from Camp Grant.

Shaw, Major F. W., Mount Vernon, to Fort Sill, Okla., from Camp Perry.

Shelton, Capt. W. J., DeKalb, to Camp Crane, Pa., from Fort Oglethorpe.

Short, Lieut. U. S., St. Louis, to Camp Wadsworth, S. C., evacuation hospital, from Camp Jackson.

Shumaker, Lieut. C. H., St. Louis, to Camp Sevier, S. C., base hospital, from Camp Greene.

Simon, Capt. F. C., St. Louis, to Arcadia, Fla., Carlstrom Field, as flight surgeon, from Hampton, Va.

Smith, Lieut. A. J., Boonville, to report to the commanding general, Philippine Department, from Camp Lewis.

Spalding, Lieut. L. M., Olean, to Camp Cody, N. M., as assistant to division surgeon, from Camp Beauregard.

Sparhawk, Lieut. W. J., St. Louis, to Camp McClellan, Ala., base hospital, for instruction, from Fort Oglethorpe.

Spencer, Capt. F. B., Hannibal, to Camp Sevier, S. C., as tuberculosis examiner, from Camp Jackson.

Stapp, Lieut. J. H., Hardin, to Camp Logan, Texas, from Fort Riley.

Statler, Capt. W. K., Oak Ridge, to Camp Wheeler, Ga., from Fort Riley.

Stone, Lieut. A. R., Palmyra, to Camp Devens, Mass., from Fort Riley.

Streeter, Capt. R. D., Moberly, to Camp Pike, Ark., from Camp Kearney.

Swartz, Lieut. J. L., St. Louis, to Fort Oglethorpe, base hospital, from Camp Dodge.

Timerman, Capt. A. R., St. Joseph, to Camp Cody, N. M., base hospital, from Camp Travis.

Tucker, Lieut. C. A., Springfield, to Camp Logan, Texas, from Fort Riley.

Underwood, Capt. M. L., St. Joseph, to Camp McClellan, Ala., base hospital, from Camp Pike.

Underwood, Lieut. R. H., Kansas City, to Camp Beauregard, La., base hospital.

Vaughan, Capt. J. R., St. Louis, to Fort Sheridan, Ill., base hospital, from Cape May.

Viehe, Lieut. R. F., St. Louis, to Fort Riley, for instruction.

Wagner, Lieut. W. H., Berger, to Fort Benjamin Harrison, base hospital, from Camp Travis.

Walker, Capt. E. R., Sedalia, to Fort Oglethorpe, for instruction.

White, Lieut. J. B., St. Louis, to report to the commanding general, Philippine Department, from Camp Logan.

Wichmann, Capt. A. G., St. Louis, to Camp Greene, N. C., base hospital, from Camp McClellan.

Wiesner, Lieut. B. J., St. Louis, to Lonoke, Ark., Eberts Field, from Camp McClellan.

Willite, Lieut. G. O., Centertown, to Fort Riley, for instruction.

Wobus, Capt. R. E., St. Louis, to Camp Beauregard, La., base hospital, from Fort Oglethorpe.

Wolfman, Lieut. S. J., St. Louis, to Camp Grant, Ill., from Army Medical School.

Wyer, Major H. G., Kirkwood, to Camp Crane, Pa., from Surgeon-General's Office.

Yahlem, Lieut. N. N., St. Louis, to Camp Logan, Texas, from Fort Riley.

Breyfogle, Capt. H. A., Kansas City, to Fort Riley, for instruction.

Bridges, Capt. J. R., Kahoka, to Camp Grant, Ill.

Briggs, Capt. G. Y., St. Louis, to Fort Riley, for instruction.

Brown, Lieut. C. A., Kansas City, to Fort Oglethorpe, for instruction.

Brownfield, Capt. S. T., Brookfield, to Fort Riley, for instruction.

Bryant, Capt. C. H., Kansas City, to Fort Oglethorpe, for instruction.

Bulkley, Lieut. C. H., La Plata, to Fort Riley, for instruction.

Burke, Lieut. J. P., Jr., California, to Camp Jackson, S. C.

Burney, Lieut. R. H., Kansas City, to Camp MacArthur, Texas.

Butler, Capt. O. W., Kansas City, to Fort Oglethorpe, for instruction.

Caldwell, Lieut. J. C., Laclede, to Fort Riley, for instruction.

Callaghan, Lieut. R., Kansas City, to Fort Oglethorpe, for instruction.

Campbell, Lieut. W., Kansas City, to New Haven, Conn., for instruction.

Cartwright, Lieut. C. P., Hughesville, to Fort Oglethorpe, for instruction.

Castelaw, Capt. R. E., Kansas City, to Camp Dodge, Iowa.

Chalkley, Capt. A. J., Lexington, to Fort Riley, for instruction.

Chase, Lieut. F. E., St. Louis, to Fort Oglethorpe, for instruction.

Clabaugh, Capt. O. W., Sedalia, to Fort Oglethorpe, for instruction.

Clarenbach, Lieut. W. S., Wright City, to Fort Riley, for instruction.

Cohen, Capt. F., Kansas City, to New Haven, Conn., Yale Army Laboratory School, for instruction.

Coleman, Lieut. H. T., Pattonville, to Fort Oglethorpe, for instruction.

Conrad, Lieut. C. L., Pleasant Hill, to Camp Pike, Ark., base hospital, for instruction.

Conrad, Lieut. H. S., St. Joseph, to Fort Oglethorpe, for instruction.

Crooks, Lieut. O. R., Kansas City, to Fort Riley, for instruction.

Davis, Capt. H. B., Kansas City, to Fort Oglethorpe, for instruction.

Dod, Capt. F. L., Greenwood, to Fort Riley, for instruction.

Dorsheimer, Lieut. G. V., Kansas City, to New Haven, Conn., Yale Army Laboratory School, for instruction.

Doyle, Capt. J. M., St. Joseph, to Fort Oglethorpe, for instruction.

Durham, Lieut. S. L., Dearborn, to Fort Riley, for instruction.

Eberlein, Capt. E. W., St. Louis, to Fort Riley, for instruction.

Edmondson, Lieut. J. L., Stella, to Fort Riley, for instruction.

Emmons, Lieut. F. H., Auxvasse, to Fort Riley, for instruction.

COMMISSIONS OFFERED AND ORDERS TO DUTY ON ACCEPTANCE, SEPTEMBER 21 TO OCTOBER 19, INCLUSIVE

Allee, Lieut. W. L., Eldon, to Camp Pike, Ark., base hospital.

Anderson, Lieut. W. C., Kansas City, to Fort Riley, for instruction.

Atwood, Lieut. W. G., Carrollton, to Fort Omaha, Neb.

Barrymore, Capt. E., Silex, to Fort Riley, for instruction.

Bedford, Capt. S. V., Jefferson City, to Camp Custer, Mich.

Benson, Capt. B. G., St. Louis, to Fort Oglethorpe, for instruction.

Bird, Lieut. J. B., Kansas City, to Fort Riley, for instruction.

Bishop, Capt. W. T., Hughesville, to Fort Oglethorpe, for instruction.

Blackman, Capt. C. S., Parma, to Fort Riley, for instruction.

Bradley, Capt. J. M., St. Louis, to Camp Dodge, Iowa.

- Engelmann, Lieut. O. R., St. Louis, to Fort Omaha, Neb.
- Eure, Capt. J. B., Poplar Bluff, to Fort Oglethorpe, for instruction.
- Field, Lieut. A. C., Kansas City, to Fort Riley, for instruction.
- Fitzporter, Lieut. A. L., St. Louis, to Camp Lee, Va.
- Flader, Lieut. O. F., St. Louis, to Fort Oglethorpe, for instruction.
- Fleischman, Lieut. J. C., St. Louis, to Fort Oglethorpe, for instruction.
- Ford, Lieut. W. W., Gordonville, to Camp Logan, Texas, base hospital, for instruction.
- Frakes, Lieut. E. N., Harrisburg, to Camp MacArthur, Texas.
- Garstang, Capt. D. B., St. Louis, to Fort Oglethorpe, for instruction.
- Gay, Lieut. R. W., Ironton, to Fort Riley, for instruction.
- Gettys, Capt. H. B., St. Louis, to Fort Oglethorpe, for instruction.
- Gifford, Capt. A. W., Springfield, to Camp Travis, Texas, base hospital.
- Good, Capt. C. A., St. Joseph, to Fort Oglethorpe, for instruction.
- Greene, Capt. L. B., Kansas City, to Fort Oglethorpe, for instruction.
- Hamilton, Capt. E. P., Kansas City, to Fort Oglethorpe, for instruction.
- Hamilton, Capt. H. D., Kansas City, to Camp Dodge, Iowa, base hospital.
- Hansen, Lieut. W. J., St. Joseph, to Fort Omaha, Neb.
- Harris, Major D. L., St. Louis, to New Haven, Conn., Yale Army Laboratory School, for instruction.
- Hatch, Capt. F. J., Kansas City, to Fort Oglethorpe, for instruction.
- Hearst, Lieut. A. L., Kansas City, to Fort Oglethorpe, for instruction.
- Hein, Lieut. E. E., St. Louis, to Des Moines, Iowa, base hospital.
- Hickerson, Capt. J. T., Centralia, to Fort Oglethorpe, for instruction.
- Horrom, Lieut. G. W., Rolla, to Fort Riley.
- Hughart, Lieut. H. H., St. Louis, to Fort Omaha, Neb.
- Humphrey, Capt. J. H., St. Louis, to Fort Oglethorpe, for instruction.
- Hyland, Lieut. R. F., St. Louis, to Fort Oglethorpe, for instruction.
- Jackson, Lieut. J. D., Kansas City, to New Haven, Conn., Yale Army Laboratory School, for instruction.
- James, Capt. J. D., Springfield, to Fort Oglethorpe, for instruction.
- Jones, Lieut. A. B., Shackleford, to Camp Fremont, Calif.
- Kelly, Lieut. R. Q., Bunceton, to Fort Omaha, Neb.
- Kessler, Lieut. E. B., St. Joseph, to Louisville, Ky.
- Kimball, Capt. A. C., St. Louis, to Fort Riley.
- Kimberlin, Lieut. H. C., Trenton, to Fort Omaha, Neb.
- King, Lieut. S. J., St. Louis, to Fort Riley, for instruction.
- Koch, Lieut. A. G., Kansas City, to Fort Riley, for instruction.
- Koenig, Lieut. G. H., St. Louis, to Fort Riley, for instruction.
- Koenig, Capt. G. W., St. Louis, to Fort Oglethorpe, for instruction.
- Koenig, Lieut. O. M., St. Louis, to Fort Oglethorpe, for instruction.
- Kring, Capt. R., St. Louis, to Fort Oglethorpe, for instruction.
- Lane, Capt. H. H., Kansas City, to Fort Riley, for instruction.
- Lilly, Lieut. T. E., Kansas City, to Camp Dodge, Iowa, base hospital, for instruction.
- Longfield, Capt. F. J., Lathrop, to Rockford, Ill.
- Loutzenhiser, Lieut. J. L., Ravanna, to Camp Grant, Ill.
- Luton, Capt. L. S., St. Louis, to Camp Dodge, Iowa.
- Lyter, Capt. J. C., St. Louis, to Camp Custer, Mich.
- Mackey, Capt. J. F., Kansas City, to Fort Riley, for instruction.
- May, Lieut. B. F., St. Louis, to Fort Oglethorpe, for instruction.
- McCarty, Lieut. V. W., Kansas City, to Camp Pike, Ark., base hospital.
- McKellops, Lieut. L. G., St. Louis, to Camp Dodge, Iowa.
- McLarney, Lieut. J. T., Brookfield, to Fort Oglethorpe, for instruction.
- McNees, Capt. A. J., Clinton, to Fort Riley, for instruction.
- McGee, Lieut. O. K., Moberly, to Mineola, N. Y., for instruction.
- Meluney, Lieut. S. E., Agency, to Fort Riley, for instruction.
- Meredith, Lieut. A. L., Prarie Home, to Louisville, Ky.
- Miller, Lieut. E. L., Kansas City, to Fort Oglethorpe, for instruction.
- Monroe, Lieut. L. E., Bonne Terre, to Fort Riley, for instruction.
- Monahan, Lieut. E. P., Kansas City, to Camp Doniphan, Okla.
- Moore, Lieut. E. M., Corder, to Camp Dodge, Iowa.
- Mount, Capt. R. L., Polo, to report to the commanding officer, Central Department.
- Mulford, Lieut. R. T., St. Louis, to Fort Riley.
- Owen, Lieut. H. I., Fulton, to Fort Oglethorpe, for instruction.
- Parmenter, Lieut. C. G., Kansas City, to Fort Riley, for instruction.
- Perry, Lieut. D. C., Mound City, to Fort Riley, for instruction.
- Pitzman, Lieut. M., St. Louis, to Camp Pike, Ark., base hospital, for instruction.
- Potter, Lieut. C. A., St. Joseph, to Camp Gordon, Ga., base hospital, for instruction.
- Pringle, Lieut. J. A., St. Louis, to Camp Lee, Va., base hospital.
- Quigley, Capt. B. T., Mound City, to Fort Oglethorpe, for instruction.
- Ragsdale, Capt. T. J., Lee's Summit, to Fort Riley, for instruction.
- Raines, Capt. O. C., St. Louis, to Fort Oglethorpe, for instruction.

Ray, Lieut. J. E., Kansas City, to Fort Oglethorpe, for instruction.

Reim, Lieut. W. H., St. Louis, to Fort Oglethorpe, for instruction.

Riggs, Lieut. J. M., Wayland, to Fort Omaha, Neb.

Rogers, Lieut. M. W., Princeton, to Fort Riley, for instruction.

Roseberry, Capt. E. M., Neosho, to Fort Oglethorpe, for instruction.

Ruble, Lieut. E. L., Kansas City, to Fort Riley, for instruction.

Russell, Lieut. D. R., Kansas City, to Fort Riley, for instruction.

Russell, Lieut. S. A., Fairview, to Fort Oglethorpe, for instruction.

Rutherford, Lieut. O. L., Bellflower, to Fort Riley, for instruction.

Ryland, Lieut. C. T., Lexington, to Camp Grant, Ill.

Sams, Lieut. W. M., Kansas City, to Fort Oglethorpe, for instruction.

Sawyer, Capt. T. T., Kansas City, to Fort Oglethorpe, for instruction.

Shafer, Lieut. F. M., Osborn, to Rockford, Ill.

Sheets, Lieut. J. S., St. Louis, to Fort Omaha, Neb.

Sherman, Lieut. C. A., Kansas City, to Fort Riley, for instruction.

Shuck, Lieut. L. I., Nelson, to Fort Oglethorpe, for instruction.

Slaughter, Lieut. S. C., Fredericktown, to Fort Oglethorpe, for instruction.

Sloan, Lieut. E. L., Joplin, to Fort Oglethorpe, for instruction.

Stacy, Capt. E. W., Princeton, to Fort Oglethorpe, for instruction.

Starks, Lieut. J. C., Gower, to Fort Oglethorpe, for instruction.

Stevenson, Lieut. G. R., St. Joseph, to Fort Riley, for instruction.

Stratton, Lieut. C. S., Roscoe, to Fort Oglethorpe, for instruction.

Stratton, Lieut. S. H. O., Lincoln, to Fort Oglethorpe, for instruction.

Swearingen, Capt. J. A., Wyaconda, to Fort Oglethorpe, for instruction.

Tate, Capt. B. F., St. Louis, to Fort Oglethorpe, for instruction.

Trawick, Capt. G. C., St. Louis, to Fort Riley, for instruction.

Tunnell, Lieut. J. D., Reger, to Camp Dodge, Iowa.

Turner, Lieut. R., St. Louis, to Fort Riley, for instruction.

Twyman, Lieut. E. D., Independence, to Fort Oglethorpe, for instruction.

Vanorden, Lieut. H. F., Kansas City, to Fort Oglethorpe, for instruction.

Van Ravenswaay, Capt. C. H., Boonville, to Fort Oglethorpe, for instruction.

Walker, Capt. J. M., Kansas City, to Fort Riley, for instruction.

Wattenberg, Lieut. J. E., Kansas City, to Fort Oglethorpe, for instruction.

Werner, Capt. C. H., St. Joseph, to Fort Riley, for instruction.

Wheeler, Capt. W. M., Sedalia, to Fort Oglethorpe, for instruction.

Williams, Lieut. J. H., Hume, to Fort Oglethorpe, for instruction.

Winn, Lieut. J. W., Higbee, to Camp MacArthur, Texas.

Winn, Lieut. R. M., Hannibal, to Camp Logan, Texas.

Wright, Capt. C. G., St. Louis, to Camp Custer, Mich.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH HAVE PAID THE STATE ASSESSMENT FOR ALL THEIR MEMBERS)

Taney County Medical Society, Nov. 17, 1917.

Webster County Medical Society, Nov. 21, 1917.

Wright County Medical Society, Dec. 3, 1917.

Schuyler County Medical Society, Dec. 4, 1917.

Platte County Medical Society, Dec. 5, 1917.

Madison County Medical Society, Dec. 17, 1917.

Livingston County Medical Society, Dec. 19, 1917.

Ste. Genevieve County Medical Society, Dec. 22, 1917.

Benton County Medical Society, Dec. 24, 1917.

Adair County Medical Society, Dec. 27, 1917.

Carter-Shannon County Medical Society, Jan. 9, 1918.

Chariton County Medical Society, Jan. 11, 1918.

Holt County Medical Society, Jan. 21, 1918.

St. Clair County Medical Society, Jan. 21, 1918.

Barton County Medical Society, Jan. 22, 1918.

Henry County Medical Society, Jan. 24, 1918.

Moniteau County Medical Society, Jan. 28, 1918.

Camden County Medical Society, Feb. 1, 1918.

Scott County Medical Society, Feb. 2, 1918.

Cedar Country Medical Society, Feb. 8, 1918.

Clark County Medical Society, Feb. 8, 1918.

Cooper County Medical Society, Feb. 13, 1918.

Atchison County Medical Society, Feb. 18, 1918.

Ralls County Medical Society, March 10, 1918.

Pulaski County Medical Society, March 11, 1918.

Pemiscot County Medical Society, March 25, 1918.

Cape Girardeau County Medical Society, March 28, 1918.

Vernon County Medical Society, March 28, 1918.

Putnam County Medical Society, April 11, 1918.

Cass County Medical Society, April 13, 1918.

Laclede County Medical Society, April 15, 1918.

Clay County Medical Society, May 2, 1918.

Newton County Medical Society, May 2, 1918.

Jefferson County Medical Society, May 8, 1918.

Pettis County Medical Society, May 11, 1918.

Johnson County Medical Society, May 31, 1918.

Macon County Medical Society, June 24, 1918.

Gentry County Medical Society, July 11, 1918.

Daviess County Medical Society, July 15, 1918.

Laclede County Medical Society, Aug. 9, 1918.

Marion County Medical Society, Sept. 9, 1918.

ST. LOUIS MEDICAL SOCIETY

Meeting of the Council, May 15, 1918

The meeting was called to order at 8:50 p. m., by the secretary. Dr. Baldwin moved that Dr. Hamel act as chairman in the absence of Dr. Smith. Carried.

The minutes of the previous meeting were read, corrected and approved.

A communication from the Auxiliary Medical Defense Committee of St. Louis containing resolutions requesting the Society to take summary action concerning members who have not become citizens of the United States was read.

Dr. Funkhouser moved that no person of alien enemy citizenship be allowed to hold membership in the St. Louis Medical Society. Seconded and carried.

The secretary read a letter from Dr. N. K. Mills regarding his membership in the Society. It was moved that Dr. Mills' 1918 dues be remitted and his resignation be accepted. Carried.

A letter from Dr. Bliss resigning from the Council was read. Dr. Tupper moved that Dr. Bliss be asked to reconsider his action. Seconded and carried.

A communication from Dr. Frederick Kolbenhayer in regard to affiliate membership in the American Medical Association was read. Dr. Tupper moved that this be referred to the Membership Committee for investigation. Carried.

Dr. Gorin reported for the Membership Committee recommending the following for active membership, all of whom were unanimously elected: Edwin P. Meiners, St. Luke's Hospital; James M. Black, 5003 Delmar Ave.; Alonzo L. Fitzporter, 3549 Olive St.; Arthur H. Deppe, 2402 Marcus Ave.; Richard Kring, 2732 S. 13th St.

The applications of Drs. Lawrence Mendonsa and T. B. Edwards were rejected.

Dr. Shapleigh reported for the Bartscher Fund Committee stating that the committee had deducted \$200 from the income to add to the \$1,800 balance on hand and the \$3,000 Biest note making \$5,000 to invest in Third Liberty Loan Bonds. Dr. Boisliniere moved that the Council approve the above action of the Bartscher Fund Committee. Carried.

Dr. Shapleigh also reported that the Second Liberty Loan Bonds were not convertible into Third Liberty Loan Bonds.

Dr. Hamel reported that the House of Delegates at the meeting of the Missouri State Medical Association had left the matter of the dues of men in service entirely in the hands of the component societies and he suggested that this matter be referred to the general society, by the president, at the next meeting. Dr. Hamel also suggested that the local dues of members in service be remitted and a committee be appointed to raise a patriotic fund for paying the state assessment of these members.

Adjournment 11:50 p. m.

Councilors present: Drs. Baldwin, Boisliniere, Funkhouser, Gayler, Hamel, Kuhlmann, Rehfeldt, Tupper, North, and Gundlach.

Councilors absent: Drs. Bliss, Kane, Schlueter, and Smith.

Visitors present: Drs. Koetter, E. Lee Myers, John B. Shapleigh, R. Brent Murphy, William E. Jost, Francis Reder, M. George Gorin, and Henry J. Scherck.

Meeting of the General Society, June 8, 1918

The meeting was called to order at 9 p. m., by the president, Dr. Elsworth S. Smith.

The minutes of the meetings of May 25 and June 1 were read, corrected and approved.

Dr. Hamel moved that the Society go into executive session. Seconded and carried.

The minutes of the special meeting of June 7, and the special meeting of June 8, were read and approved.

The chair stated the special order of business would now be considered, which was the discussion of the affairs of the Business Bureau. The chair ruled that as only the legality of the Business Bureau was up for discussion and as its efficiency was not involved, the discussion must be limited to the legality of the Society conducting the Bureau under articles of incorporation.

After considerable discussion concerning the legality of the bureau and offering of some motions that received no second, Dr. Charles moved the adoption of the following resolution:

Resolved, That the St. Louis Medical Society believes the Business Bureau is illegal. Seconded and carried.

Dr. Behrens offered the following resolution on the death of the wife of Dr. Funkhouser, which was adopted by a silent rising vote:

Resolved, That the St. Louis Medical Society extend their sympathy to Dr. Funkhouser in this hour of bereavement.

Dr. Boisliniere reported for the Council on alien enemy citizenship and submitted the following resolutions which were adopted.

WHEREAS, At a special meeting of the Council of the St. Louis Medical Society, held June 4, 1918, a resolution was adopted to the effect that no alien enemy be permitted to hold membership in the St. Louis Medical Society and that the undersigned be instructed to present said resolution to the St. Louis Medical Society at its next regular meeting, and

WHEREAS, This resolution was adopted in response to a communication received and indorsed by the St. Louis Medical Society from the State Committee on National Defense asking said Society to deal summarily with all alien enemies in its ranks, be it

Resolved, That the By-Laws be suspended and that membership in the St. Louis Medical Society of each and every alien enemy now on its roster be and hereby is from this moment terminated.

Dr. Hamel spoke about remitting the dues of members in service and moved that the St. Louis Medical Society approve the action of the House of Delegates of the State Association in reference to remitting dues of members in active service and that the chairman appoint a committee of five to solicit patriotic funds for paying the state assessment of members in service. Seconded and carried.

Attendance 180.

ARTHUR GUNDLACH, M.D., Secretary.

Meeting of the General Society, Sept. 21, 1918

The meeting was called to order at 8:40 p. m. by the President, Dr. Elsworth S. Smith. The minutes of the meetings of June 8 and June 15 were read and approved by vote.

The scientific program consisted of the following case reports:

Demonstration of case of myelogenous leukemia.

Special etiology and beneficial effect of benzol and X-ray treatment, by Dr. Elsworth S. Smith.

Demonstration of case of lymphatic leukemia, presenting result of X-ray treatment, by Charles H. Neilson.

Demonstration of cases of hypopituitarism, by Dr. William Engelbach.

Demonstration of case of pernicious anemia, by Dr. S. T. Lipsitz.

Demonstration of case of syphilitic liver, by Dr. J. C. Lyter.

Discussion by Drs. Neilson, Lipsitz, Lyter, Engelbach and Smith.

Motion was made that the Society indorse and give support to the efforts of the People's Hospital Association in organizing a hospital to be used for colored people exclusively. Carried.

The Secretary was instructed to write Dr. W. P. Curtis, President of the Mound City Medical Society, of the above action.

A communication from the Mississippi Valley Conference on Tuberculosis was read extending an invitation to the St. Louis Medical Society to attend their sessions on Oct. 2, 3 and 4, 1918. The invitation was accepted.

Attendance, 65.

ALBERT F. KOETTER, M.D., Secretary.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at the Noyes Hospital Wednesday evening, September 18. Eleven members were present, and the president, Daniel Morton, in the chair.

Dr. John I. Byrne, assisted by Dr. G. R. Stevenson, presented the following clinics:

1. A case of senile gangrene.
2. A case of a gunshot wound through the liver and mesentery with pulmonary abscess.
3. Syphilitic abscess at the crest of the ilium.
4. Traumatic injury of the skull.

The following applications for membership received their first reading and were referred to the board of censors for investigation and report: Drs. E. A. Burgher, W. E. Pentz, Sidney Lawson, John C. Whitsell.

The following resolution was adopted:

Resolved, That the Chairman appoint a committee, consisting of the secretary and two other members, to keep in touch with members of the Society who are in service.

Meeting of October 2

The regular meeting of the Buchanan County Medical Society was held at the Public Library Building Wednesday evening, October 2. Twenty-two members were present. The President, Dr. Daniel Morton, was in the chair. The minutes of the previous meeting were read, corrected and approved.

The following applications for membership received their second reading and were duly elected, as follows: Dr. A. F. Burgher, Dr. Sidney Lawson, Dr. John C. Whitsell.

Applications for membership from the following received their first reading: Dr. Henry J. Ravold, Dr. E. A. Mendall, St. Joseph.

A very interesting discussion on Spanish influenza

was lead by Dr. H. DeLameter and participated in by the following members: Drs. Good, Byrne, Wallace.

There being no further business for the society, the meeting adjourned.

Meeting of October 16

The regular meeting of the Buchanan County Medical Society was held at their rooms in St. Joseph, Wednesday evening, October 16, with the president, Dr. Daniel Morton, in the chair. Eighteen members were present. The minutes of the previous meeting were read and approved.

The following applications for membership received their second reading, were balloted on, and elected: Henry J. Ravold, E. A. Mendall, both of St. Joseph.

The topic of the evening consisted of a discussion relating to the pneumonia of influenza, led by Dr. H. DeLameter. A very complete discussion was indulged in and many leading points brought out.

W. F. GOETZE, M.D., Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

The Gasconade-Maries-Osage County Medical Society met in the Assembly Hall of the Public School of Freeburg, Sept. 26, 1918. In the absence of the president Dr. Fred Auf der Heide was elected to preside over the meetings. The first business was reading the minutes of the last meetings and their approval.

The following doctors were present and participated in the proceedings: Drs. Fred Auf der Heide, Drake; J. D. Seba, Bland; W. R. Ferrell, Vienna; A. J. Crider, Brinktown; J. J. Radmacher, Argyle; H. G. Isenberg, Vanclave, and F. J. Wessling. Visitors: Drs. Charles Wyche and J. A. Warner of St. Louis; C. A. Lunge, Bland; W. E. Johnson, Belle; J. L. A. Buechler, Freeburg.

Dr. Wyche of St. Louis spoke on the necessity of the inspection of the schoolchildren of the state. He said in part, that he had visited several sections of the state in the interest of a law requiring the inspection of schoolchildren. He had examined the schoolchildren of Freeburg and found a number who had adenoids and some had infections of the eyes. Permit us to state in this connection that he visited the schools of Vienna the next day and the schools of Linn the day following. At these various places he inspected the schoolchildren and spoke on some subject of health to the public.

The next meeting was set for the first Thursday in December, which falls on December 5. At this meeting there will be elected the officers for the next year and also the payment of dues will be received. At the night session Dr. Charles Wyche explained to the public what was meant by school inspection and why the next legislature would be asked to pass such a law. He said that the Christian Scientists had defeated the law during the last session of the legislature.

Dr. J. A. Warner spoke on the prevention of disease in children as well as in adults. He emphasized the wearing of proper clothing and use of clean food and water.

Both addresses were highly appreciated by the audience and we believe that much good was accomplished inasmuch as the laymen now understand that the medical profession as a whole are more interested in their general welfare and the public health than they are in chasing the almighty dollar.

The doctors voted their thanks to Dr. Wyche and Dr. Warner for their participation in the proceedings and for their interesting and edifying lectures.

Our members will please remember the date of our next meeting is December 5, in Linn, where they are expected to be present in large numbers, pay their dues for next year, and elect a set of officers that will serve them during the year of 1919.

JOHN D. SEBA, M.D., Secretary.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at the office of Drs. Potter and Potter, Lancaster, Mo., Sept. 11, 1918.

The meeting was called to order by the President, Dr. B. B. Potter, at 2 p. m., with the following members present: Drs. B. B. Potter, W. F. Justice, J. H. Keller, H. E. Gerwig and A. J. Drake. Owing to the absence of the Secretary the minutes of the last meeting were not read, and Dr. A. J. Drake was appointed acting secretary.

Dr. H. E. Gerwig read a paper on gastritis. It was a very interesting paper and was discussed at length by the members.

There being no further business, the society adjourned to meet Dec. 3, 1918.

A. J. DRAKE, M.D., Acting Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The meeting of the St. Louis County Medical Society was called to order at 4 p. m. by President Reynolds. Present, Drs. Reynolds, Westrup, Meisch, Brossard, Miles, Cape, Sandfos, Conway, Sutter, Trumpour. The minutes of the previous meeting were read and approved.

A transfer card from the St. Charles County Medical Society was presented by Dr. H. N. Corley and he was welcomed as a member of the Society by motion duly carried.

There being no member of the Board of Censors present and the application of Dr. Leon of Clayton being still in abeyance awaiting the report of the board, the secretary was instructed to communicate with its chairman and request that a report be rendered at the next meeting in order that action might be taken.

A communication from Dr. Martin, chairman of the Medical Section of the National Council of Defense, addressed to the representatives of the Volunteer Medical Corps for St. Louis County, giving detailed information regarding the purposes for which the corps was created and the obligations and duties of members thereof, was read for the information of the Society.

Dr. Corley reported a case of pneumonia in the person of his son, aged 7, and asked advice from members of the society.

Dr. Miles reported a case in which premature birth at six months had occurred, followed by apparent recovery of the mother, in which one month after delivery she was suddenly attacked by tenderness over the abdomen, temperature 105, and pulse of 60 which persisted throughout the attack. After curettement, improvement set in and she slowly recovered. A general discussion of the case followed and several members reported peculiar cases of pregnancy which had occurred in their practices.

A CONWAY, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

CHLORCOSANE-SQUIBB.—It complies with the standards for chlorcosane, N. N. R. Chlorcosane is a liquid, chlorinated paraffin containing its chlorine in stable (non-active) combination. It is used as a solvent for dichloramine-T and is itself without therapeutic action. E. R. Squibb and Sons New York.

THROMBOPLASTIN SOLUTION-ARMOUR.—An extract of cattle brain in physiological sodium chloride solution prepared according to the method of Hess. It complies with the description of Solution Brain Extract, N. N. R. As a hemostatic, the solution is applied directly to bleeding tissues or applied by means of a spray or tampon. See New and Nonofficial Remedies, 1918, p. 136, under "Fibrin Ferments and Thromboplastic Substances" (Kephalin). Armour and Co., Chicago.

CORPUS LUTEUM CAPSULES, 2 GRAINS.—Each capsule contains 2 grains of corpus luteum-Armour (see New and Nonofficial Remedies, 1918, p. 237). Armour and Co., Chicago.

SALIPYRINE TABLETS, 7½ GRAINS.—Each tablet contains 7.5 grains of salipyrine (see New and Nonofficial Remedies, 1918, p. 275). Riedel and Co., New York.

ANTIPNEUMOCOCCUS SERUM TYPE 1, GILLILAND.—It is marketed in vials containing 50 c.c. The Gilliland Laboratories, Ambler, Pa.

PHENYLCINCHONINIC ACID-ABBOTT.—A brand of phenylcinchoninic acid, U. S. P. (New and Nonofficial Remedies, 1918, p. 269). The Abbott Laboratories, Chicago.

PARRESINED LACE-MESH SURGICAL DRESSING.—Net mesh gauze impregnated with and containing from 45 to 50 per cent. of parresine (see New and Nonofficial Remedies, 1918, p. 247). The Abbott Laboratories, Chicago.

HALAZONE-SQUIBB.—A brand of halazone complying with the standards for halazone, N. N. R. It is marketed only in the form of Tablets Halazone-Squibb, ¼₁₆ grain, each containing halazone-Squibb, ¼₁₆ grain, anhydrous sodium carbonate, ¼₁₆ grain, and sodium chloride, 1¾ grains. Halazone tablets are used for the sterilization of drinking water, one to two tablets being added to one quart of water. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Sept. 28, 1918, p. 1059).

PROPAGANDA FOR REFORM

AN ITALIAN VIEW OF THE PROPRIETARY EVIL.—A Murri, professor of clinical medicine at Bologna, protests against the way he is importuned to prescribe only made-in-Italy pharmaceuticals. He declares his unswerving patriotism, but insists that the physician's duty is to prescribe that which is best

to restore the health of his patients. He holds that to elevate the pharmaceutical industry of Italy, there must be founded a supreme council of chemists, pharmacists and clinicians who will examine the made-in-Italy pharmaceuticals with the severest scientific impartiality (*Jour. A. M. A.*, Sept. 7, 1918, p. 840).

DR. A. W. CHASE'S NERVE PILLS.—According to the label, these pills are "used in the treatment" of "thin and watery blood, nervous disorders, brain fag, nervous headache, nervous dyspepsia, irregular heart action, sleeplessness," etc. A circular in the box calls attention to the use of these pills in the treatment of almost everything from pale, sallow complexion, to paralysis and locomotor ataxia. An analysis made in the A. M. A. Chemical Laboratory indicates that "Dr. A. W. Chase's Nerve Pills" contain iron, possibly in the form of ferrous sulphate which is in a state of more or less decomposition, manganese dioxid, aloes or aloin, vegetable extractive, and a trace of an alkaloidal drug (*Jour. A. M. A.*, Sept. 7, 1918, p. 844).

TWO MISBRANDED NOSTRUMS.—Brazilian Balm, directly or inferentially, was claimed to cure consumption, prevent lockjaw and "clear out of the system" the germs of typhoid and diphtheria. A shipment of the nostrum was seized by the federal authorities and ordered destroyed by the court.

Wright's Indian Vegetable Pills were claimed to cure yellow fever, smallpox, erysipelas, consumption, cancer, venereal disease, paralysis, epilepsy and other conditions too numerous to mention. The government, having seized a shipment and charged that the claims were false, the proprietors of the pills admitted the allegation (*Jour. A. M. A.*, Sept. 7, 1918, p. 844).

BITRO-PHOSPHATE.—The A. M. A. Chemical Laboratory reports that this appears to be a five-grain tablet of calcium glycerophosphate. Since a bottle containing forty-two tablets sells at one dollar and this price is sixteen hundred per cent. greater than the cost of the calcium glycerophosphate contained therein, it is asked if this comes within the excess profit tax. The claims made for Bitro-Phosphate are those which were made for calcium glycerophosphate when it was erroneously supposed that organic phosphates were more readily assimilated than inorganic phosphates. Bitro-Phosphate is sold by the Arrow Chemical Company. E. S. Prather, the present owner of this company, has been interested, directly or indirectly, in a considerable number of questionable products and schemes (*Jour. A. M. A.*, Sept. 14, 1918, p. 921).

THE PATRIOTIC MEDICAL LEAGUE IN ITALY.—In a recent issue of the *Unione dei Medici Italiani per la Resistenza Nazionale* of Italy, the work of the A. M. A. Council on Pharmacy and Chemistry is described in detail. The description of the work of the Council is by Dr. V. Ronchetti, physician in chief of the Ospedale Maggiore of Milan. He refers to the work of the Council to show what is being done in the United States in this line, "in a truly, admirable, simple and practical manner," and compares this with the ineffectual control of pharmaceuticals in Italy. He holds that it should not be a difficult matter to coordinate certain departments in Italy's universities to form the nucleus for an *istituto di controllo* for medicinal products—an institution which would serve

as a guarantee for the sick, as a guide for the manufacturing chemists in their production, and for physicians in their application of the products (*Jour. A. M. A.*, Sept. 14, 1918, p. 918).

EATONIC.—If one believes the claims of the Eatonic Remedy Co., Chicago, "the Advanced Scientific Thought of the Medical World has been called on to produce Eatonic"! According to newspaper advertisements, Eatonic "instantly relieves heartburn, bloated, gassy feeling, stops acidity, food repeating, and stomach misery." From the analysis in the A. M. A. Chemical Laboratory, it appears that Eatonic comes in the form of tablets each containing approximately 5.5 grains calcium carbonate, 15 grains sugar, 3.25 grains charcoal, with peppermint and undetermined material. Eatonic will do nothing that cannot be done as well by a "sodamint tablet" (*Jour. A. M. A.*, Sept. 21, 1918, p. 993).

CAMPETRODIN AND CAMPETRODIN No. 2.—The A. M. A. Chemical Laboratory reported to the Council on Pharmacy and Chemistry that from the advertising of the A. H. Robins Company, Richmond, Va., it appeared that Campetrodin and Campetrodin No. 2 are claimed to contain elementary (free) iodine in an "oleaginous solvent," and that the second preparation contains twice as much iodine as the first. The laboratory's examination demonstrated, however, that there was but a trace of free iodine in the preparations; that practically all of the iodine appeared to be in combination with a fatty oil, and that the second did not contain twice as much iodine as the first. Having considered this report of the analysis and the claims made for the preparations, the Council declared Campetrodin and Campetrodin No. 2 inadmissible to New and Nonofficial Remedies because of false statements as to composition and therapeutic action (*Jour. A. M. A.*, Sept. 21, 1918, p. 993).

SUGAR TREATMENT OF TUBERCULOSIS.—Domenico Lo Monaco, professor of physiologic chemistry of the University of Rome, has studied the influence of the secretions of sugar parenterally introduced. He found that when persons with copious bronchial secretions are given subcutaneous injections of 4 or 5 gm. of sugar (saccharose), expectoration rapidly diminishes and ceases completely in many cases. It is claimed that an intramuscular injection of strong sugar solution is of considerable value in the treatment of the tuberculous in that by diminishing the bronchial secretion, it diminishes the cough and annoying night sweats. It is further suggested that the treatment will be useful in that it will decrease the amount of sputum scattered about by consumptives (*Jour. A. M. A.*, Sept. 28, 1918, p. 1083).

CARMINZYM NOT ADMITTED TO N. N. R.—The Council on Pharmacy and Chemistry reports that Carminzym (Fairchild Brothers and Foster) is declared to contain in each tablet approximately 32 mg. of an extract of pancreas, 50 mg. sodium bicarbonate, 172 mg. prepared chalk, 1.5 mg. powdered ipecac and "aromatics q. s." Without considering other possible conflicts with its rules, the Council held the preparation inadmissible to New and Nonofficial Remedies because it is an irrational mixture, the use of which is detrimental to therapy. The Council explains that the employment of mixtures of pancreatic extract, alkalis, ipecac and carminatives in fixed proportion

leads to slipshod treatment and tends to make the practice of medicine mere guesswork (*Jour. A. M. A.*, Sept. 28, 1918, p. 1081).

DETERIORATION OF ARGYROL SOLUTIONS.—The manufacturers of argyrol advise that argyrol solutions be made freshly when required. The need for this precaution is confirmed by a report of work which indicated that the gonococidal activity of an argyrol solution began to decrease a few days after it had been made and had decreased 75 per cent. after two months. (*Jour. A. M. A.*, Sept. 28, 1918, p. 1084).

INSTABILITY OF FLUIDEXTRACT OF ERGOT.—There is some difference of opinion among investigators as to the keeping quality of fluidextract of ergot. However, it is clear that it loses its activity quite rapidly and may become inert within a year (*Jour. A. M. A.*, Sept. 28, 1918, p. 1084).

THE ADMINISTRATION OF QUININ.—From a study of the elimination of quinin in different diseases, it appears that for optimal effects it is best in most cases to give quinin every three or four hours in approximately 0.25 gm. doses, preferably by mouth except when there are gastro-intestinal disturbances, and here subcutaneous or intramuscular injection is indicated. Needless to say, the daily 2 gm. should be exceeded in cases of pernicious and primary malaria. The intravenous method should be employed in pernicious cases (*Jour. A. M. A.*, Sept. 28, 1918, p. 1086).

BOOK REVIEWS

MEDICAL CLINICS OF NORTH AMERICA, May, 1918 (W. B. Saunders Co., Philadelphia).

This is the "Southern Number," its contents being contributed by physicians in the Southern states. Cases from the clinics of thirteen prominent practitioners are described, ranging from "Severe Headaches," from the clinic of Dr. John P. Munroe of the Charlotte Sanatorium, to "Neuropathies," from the clinic of Dr. J. B. McElroy at the Memphis General Hospital. The book contains 224 pages, including a comprehensive index to Volume 1 which this issue concludes.

CLINICAL DIAGNOSIS. A Manual of Laboratory Methods By James Campbell Todd, M.D., Professor of Pathology, University of Colorado. Third Edition, revised and enlarged. 12mo of 585 pages, with 176 text illustrations and 13 colored plates. Philadelphia and London: W. B. Saunders Company. Cloth, \$2.50 net.

Todd's Clinical Diagnosis is a clever compilation of laboratory methods. The chapters on urine and blood are exceptionally good. The book is very good as a whole and should be of great value to the practitioner as well as the student. It presents all the accepted methods briefly and intelligently.

C. L. K

AMERICAN RED CROSS ABRIDGED TEXTBOOK ON FIRST AID. Woman's Edition. A Manual of Instruction. By Major Charles Lynch, M. R. C., U. S. Army. Prepared and Endorsed by the American Red Cross. With illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St.

This short treatise sets forth in a form very convenient for teaching the various emergencies one may

commonly meet, and directions how to proceed in their treatment. A few of the most used bandages and their application are described, as are splints and dressings for fractures. The first aid treatment of wounds is emphasized, and common poisons and their antidotes are considered. The book closes with a chapter on stretcher bearing. The book has been found most satisfactory as a textbook in a great many classes in first aid to the injured. F. R. R.

MEDICAL WAR MANUAL No. 5. Authorized by the Secretary of War and under the Supervision of the Surgeon-General and the Council of National Defense. Lessons from the Enemy; How Germany Cares for Her War Disabled, by John R. McDill, M.D., F.A.C.S., Major, Medical Reserve Corps, U. S. Army. Illustrated. Lea & Febiger, Philadelphia and New York. Price, \$1.50.

Major McDill had an unusual opportunity to write on this subject. Through the courtesy of the war ministry of Prussia, he was able personally to study and inspect the sanitary system and to get a clear idea of the medical military work of the German army.

He asserts that the medical corps of the German army is able to carry out their duties efficiently without interference or delay, due to the fact that they are equal in rank and authority with line officers.

Wounds and diseases peculiar to the present war are fully discussed. The nursing and Red Cross work, reeducation of the disabled, and orthopedic hospitals, schools and workshops are explained and illustrated by numerous photographs and diagrams. C. S.

THE HOSPITAL AS A SOCIAL AGENT IN THE COMMUNITY.

By Lucy C. Catlin, R.N., Director of Social Service Work and Executive Director of the Out-Patient Department of Youngstown Hospital, Ohio. 12mo of 113 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$1.25 net.

It is plainly evident that this book has been written by one who has had seasoned experience and has developed her opinions through actual work. The case histories are well selected and represent actual and frequently met conditions. Facsimiles of the different forms of blanks which may be used in the social service department of a moderate-sized hospital are valuable and show that the forms have been well developed from actual practice. They can easily be adapted for similar departments in other hospitals. Finally the author demonstrates clearly how hospitals should become important social agencies.

The volume may well be read with profit by physicians, hospital superintendents and directors of hospitals, superintendents of nurses and others interested in hospital work. It should be read by all social service workers. C. H. S.

DISEASES OF THE HEART, THEIR DIAGNOSIS, PROGNOSIS, AND TREATMENT BY MODERN METHODS, with a Chapter on the Electrocardiograph. By Frederick W. Price, M.D., F.R.S. (Edin.); Physician to the Great Northern Central Hospital; Assistant Physician to the National Hospital for Diseases of the Heart, London, etc. London: Henry Frowde, Hodder & Stoughton, Oxford University Press, Warwick Square, E. C., 1918. American Branch, 35 W. Thirty-Second St., New York. Price, \$7.50.

In this book of 450 pages the author deals with all the phases of heart disease, from etiology to therapy.

Forty pages are devoted to the discussion of clinical electrocardiography. This is somewhat elementary, but covers the subject well.

The best chapters are the ones on treatment and on the arrhythmias. The chapters on valvular heart disease, myocarditis and angina pectoris are not up to date. In the etiology of angina pectoris there is not a word about focal infection, and it seems to the reviewer that the author confuses myocarditis and heart strain.

As the author was McKenzie's assistant and his study of the action of drugs on the heart was under the direction of that great cardiographer, we expected something a little better. P. T. B.

MILITARY HYGIENE AND SANITATION. By Frank R. Keefer, M.D., Colonel, Medical Corps, U. S. Army; formerly Professor of Military Hygiene, United States Military Academy, West Point. Second edition, reset. 12mo of 340 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$1.75 net.

In this complete but concise textbook on hygiene, which was intended primarily for the use of officers of the line as well as of the Medical Corps, Colonel Keefer has covered the subject in a clear-cut, authoritative fashion that cannot but appeal to the experienced hygienist. The directions given are definite and to the point, and the subjects of proper clothing, equipment, shelter, ventilation, the disposal of wastes, etc., are discussed as fully as is practicable in a manual of this size. The chapters on sanitation in trench warfare, and sanitation of marches and battlefield, with explanatory diagrams, will prove of great value to the civilian practitioner who is just entering military service. A score of pages are devoted to "alcohol and other narcotics." As might be expected from so learned and unbiased a critic, alcohol is condemned as a medicinal agent and damned as a beverage. To quote Fantus, "Should humanity be deprived of liquor, it will have lost a consoler, but will have far less need of consolation." The book is one which should be in the hands of every physician. R. L. S.

SURGICAL TREATMENT. A Practical Treatise on the Therapy of Surgical Diseases for the use of Practitioners and Students of Surgery. By James Peter Warbasse, M.D., formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn. In three large octavo volumes, and separate Desk Index Volume. Volume I contains 947 pages, with 699 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Per set (three volumes and the Index Volume), cloth, \$30.00 per set.

Some one had to do it. A number of men have tried, from time to time, to gather a group of men who together should write a treatise covering the whole field of surgery in a comprehensive way. There has invariably resulted a series of volumes good in some spots and bad in others; not only lacking coherence and unity of treatment but many men were induced to write sections who had no special knowledge, or if they had it, lacked the experience in authorship to present their ideas in an acceptable manner.

At last we are to have a really comprehensive treatise written by one man who combines good sur-

gical judgment with a clear, modest, attractive, literary style. For the young surgeon it is replete with up-to-date information, well calculated to help him interpret what he sees. The text is amplified by twenty-four hundred cuts. These cuts are clear and instructive and while they do not delight the eye they do not offend the taste.

This work is the most noteworthy general treatise on surgery since Gross and Agnew presented their respective classics. It is a satisfaction to have a ready answer when the young man inquires to know the best work for his daily use. A. E. H.

GENITO-URINARY DISEASES AND SYPHILIS. By Henry H. Morton, M.D., F.A.C.S., Clinical Professor of Genito-Urinary Diseases in Long Island College Hospital; Genito-Urinary Surgeon to the Long Island and Kings County Hospitals and the Polhemus Memorial Clinic, etc. Fourth Edition, Revised and Enlarged. With 330 Illustrations and 36 Full-Page Colored Plates. St. Louis, C. V. Mosby Company, 1918. Price \$7.00.

In the new fourth edition of this work the author indicates the recent advances that have been made in the treatment of genito-urinary diseases and syphilis and calls attention to certain procedures that have perfected, or made more available, since the publication of the previous edition. These include application of high frequency current to the treatment of benign bladder tumors, and the use of radium in carcinoma of the bladder and prostate. The importance of preliminary treatment before operating in cases of hypertrophied prostate is emphasized, as are the details of the after-treatment of the operation. The newer methods of using the roentgen ray are indicated in much too limited space, but their value is emphasized when placed in competent hands and done under proper conditions. A considerable amount of space is given to the more advanced work on syphilis, both regarding laboratory and clinical methods of approaching the disease and the up-to-date therapy.

In general, the book offers a most pleasant appearance. It is especially well gotten out, is printed in good type and on good paper. It is rich in illustrations, many of them in colored plates. While some of the pictures are rather old (for instance, it seems unnecessary to multiply the number of colored plates we have of tubercle bacilli and gonococci) it is possible that they could be of value in a work of this sort. There are many interesting pictures illustrative of the author's own cases. Some of these are the equal, or even superior, to almost any that we have ever seen.

While about all the necessary ground on this subject seems to be touched on in the text there are places where description is scant. This is particularly true in the description on surgical technic where there surely is not sufficient detailed description to permit an amateur to carry out the proposed operation. The chapter on suppuration of the kidney would also admit of considerable expansion. The laboratory side of genito-urinary diagnosis is given the considerable space that it merits and here again, while extended description is not gone into, enough is said to emphasize the importance of not neglecting laboratory methods from every viewpoint.

On the whole, we consider the book of real value in filling the place for which the author intends it.

R. L.T.

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ORIGINAL ARTICLES

PULMONARY TUBERCULOSIS: ITS DIAGNOSIS AND PROGNOSIS

SCOTT P. CHILD, M.D.
KANSAS CITY, MO.

Pulmonary tuberculosis is a pathologic entity in which there are present in the lungs, in either its parenchymatous or interstitial tissues, tubercles or specific granulomata, due to an irritation or reaction set up by the tubercle bacilli. This reaction is first protective to the system, there being an attempt on the part of nature to wall in the offending foreign body. Many an autopsy, performed for other causes, reveals this protection afforded the individual early in life. The specific granulomata, the tubercle, may set up its own immunity and without other pathology, terminate. But the usual course is for caseation to follow, with associated mixed infection, and subsequent distribution of tubercle bacilli to gland, bronchus, alveolus or blood vessel.

By means of moist droplets, dried sputa or ingested food, the tubercle bacilli enter the human body, either through the respiratory or digestive tract, and lodging on but not producing disease in the mucous membranes, pass directly to tissues by blood or lymph stream. While the general view still held is that pulmonary tuberculosis originates from direct infection through the respiratory tract, Adami and others hold that it rarely develops by the bacilli lodging on bronchial or alveolar mucous membranes. (Adami, Prin. of Path., V. II). The tonsils and intestinal mucosa probably furnish the primary routes, then directly to lymph and blood channels. A break in the continuity of the skin may rarely offer entrance to the offending organism.

The clinician has not infrequently to deal with an acute miliary tuberculosis involving the lungs, or an acute tuberculous pneumonitis, but the type under consideration, and that with which he has largely to deal in diagnosis, is the

chronic pulmonary tuberculosis, in its varying stages.

For twenty-five years, the profession and social students have been interested in and studying the great white plague the world over, but the results secured have been largely in demonstrating the prevalence and location of advanced established open cases, with methods of segregation and treatment still sub judice.

But now, a wonderful opportunity for diagnosis, through study and the establishment of a prognosis, on cases of early and chronic healed tuberculosis, is being offered by the necessary examination and care of millions of men suddenly drawn into the training camps and armies of the belligerent forces in the present war. Col. George C. Bushnell, M. C., U. S. Army, of the Surgeon-General's office, and many other experts on tuberculosis, as well as a large group of competent clinicians on the military examining boards, are now securing results, and putting stress on the essential points in arriving at an early and correct diagnosis. Such is imperative in time of war, but is quite as important in civil life and in times of peace. In other words, we, as a general profession, and as internists should arrive at a more positive and an earlier diagnosis in the truly invaded or suspected case of pulmonary tuberculosis, be it just originating or reawakening in an old focus.

STATISTICS

The problem of tuberculosis is perhaps indicated in the mortality and morbidity statistics as in no other way. It is futile to say it has always been with us, therefore we must indulge it. Hookworm and malaria in the truest sense are practically similar in their origin, insidiousness and limitations on man when conditions existing for their propagation are permitted to continue.

In the United States the mortality of tuberculosis for 1870 was 340 per 100,000; in 1914 it was 154. The mortality between the ages of 15 to 44, the productive period of man, was 197.65 per 100,000 (1914, Metropolitan Life

Insurance Company Reports). Missouri had in 1915 a mortality of 135.2. In Kansas City, Mo., in 1914, it was 113.5, increasing to 124.2 per 100,000 in 1915 (United States census, 1915). Massachusetts, an eastern manufacturing and rural state, had in 1906 a death rate of 150 per 100,000 which had fallen in 1917 to 130. New York State has reported 150 as its mortality rate.

One-third of all deaths and 50 per cent. of invalidism in Germany in 1905 was due to tuberculosis (Tuberculosis Congress, Paris, 1905, Kayserling). England is said to be having a steadily declining death rate, though it is 100 per 100,000 today, with 50,000 annually dying in England and Wales from tuberculosis (B. Jour. Tub., October, 1917).

In France the conditions favorable to tuberculosis and its spread seem to be most marked. The mortality now recorded against it is 300 per 100,000 with a decided increase in the cities. Havre is credited with a mortality, previous to the war, of 40 per cent. of the total death rate from all causes in New York City. It is estimated that 400,000 of France's 30,000,000 are tuberculous. By Jan. 1, 1916, 86,000 French troops returned to their homes with active tuberculosis; and by February, 1917, it was estimated that 150,000 had returned invalidated by the infection (Biggs, Amer. Rev. Tub., July, 1917).

Naegli and Burckhardt (Krouse, Tex. S. J. M., March, 1917) claim 100 per cent. of human adults exhibit specific tubercles of the lungs. Baldwin (Osler, Mod. M., viii), more conservative, holds that 50 per cent. of human population acquire an implantation of tubercle bacilli some time in life. Ninety-seven per cent. of those coming to autopsy in Zurich show sign of healed tuberculosis (Tex. S. J., March, 1917). A positive tuberculin reaction is derived from 64 per cent. of children between the ages of 7 and 10, and 77 per cent. between the ages of 11 and 14 years. Pottinger (Iowa Med. Soc., May 9, 1917, address) claims 70 to 80 per cent. of children up to 15 years of age disclose demonstrable signs of tuberculosis.

Such statistical figures, even though only approximate, with the large number of advanced cases under observation by the general profession, the colonies in hospitals and sanatoria, and the many healed wrecks, to say nothing of the potent but undiagnosed cases, should impress us with the gravity of the tuberculosis problem and the important part we should take in its early diagnosis and prophylaxis.

DIAGNOSIS

In approaching the suspected case for diagnosis, standardization of method of examination is most important, as emphasized by Hawes of Boston (Med. Clinics N. A., January, 1917,

p. 1035). Routine, as brought out by Bushnell in the examination of large numbers of men, as in factories and training camps, with stress on only positive and accepted signs, is essential even to approximate correctness of diagnosis.

The following brief outline yields a basis for a scheme of examination, the specific points being generally accepted as essential:

1. History, family, personal, environmental.
2. Symptoms and signs: (a) lungs, cough; (b) hemoptysis; (c) weight and strength; (d) heart and circulatory system; (e) sputum; (f) periodic temperature.
3. Physical examination: (a) Inspection; (b) percussion; (c) palpation; (d) auscultation; (e) tuberculin and serology; (f) x-ray.

1. *History.*—History, as emphasized by Bushnell, is impractical and almost valueless, in the examining of large groups of men of various origins, nationalities and degrees of intelligence, and where time is the all-important element, as in the present world war. In the private case, however, history is of prime importance. It should include the family medical records, stressing especially the possibility of several members of the family or early household, of the patient, having had tuberculosis; a sick roommate or office associate. Then the patient's personal medical history, as to frequent attacks of tonsillitis, bronchitis, whooping cough, pneumonia, pleurisy, malnutrition, lack of endurance in school or early occupation. A fact, which is growing in recognition, and yet not stressed by the general profession nor accepted by the lay public, is that the infection of tuberculosis is usually acquired early in life, in childhood; that some local form, as a tuberculous tonsillitis, adenitis or bronchitis, existed, was clinically cured, but with living tubercle bacilli left in closed focus. This was only awaiting another illness, period of lowered resistance, or severe physical strain for the later development, but without necessity of exposure to new external infection. Especially true has this been among the French in the present war. Elliott believes that 40 to 50 per cent. of adults of military age react to tuberculin and that they have a walled off implantation of tubercle bacilli, which under severe conditions may break down and become active (Amer. Rev. of Tuberculosis, July, 1917).

In addition, the occupation of years, exposure to climatic extremes, personal habits of drink, insufficient or imperfect diet and outdoor or indoor life all enter into history, and are of relative value.

2. *Symptoms.*—Cough is usually one of the earliest phenomena to consider. If persisting or recurring, with or without associated signs, it should lead both patient and physician to look for and demonstrate the cause. Local cir-

latory or cardiac conditions may be the etiologic factor, but if such is not evident, proof should be sought that a tuberculous involvement of some part of the respiratory tract or tissues may not be provoking it. Protracted local treatments of tuberculous tonsils have been resorted to, over a period of months, permitting the establishment of an apical and finally general pulmonary tuberculosis, while an adenectomy, tissue examination and hygiene would have effected a cure. An elongated uvula has been removed to relieve a cough, when a sputum and physical examination would have revealed restricted but active apical tuberculosis.

The x-ray has revealed a dilated, ascending aorta, with old calcareous bronchial glands and sclerosed pulmonary tissues from a past tuberculous process, as contributory to a cough. But previous to any ulceration of tuberculous process into bronchus, sufficient congestion with some secretion, may produce persistent cough, though neither râles nor sputum with tubercle bacilli are found associated.

Hemoptysis.—A history or positive knowledge of a hemoptysis of a $\frac{1}{2}$ dram to a $\frac{1}{2}$ ounce, especially if repeated, is practically diagnostic of tuberculosis. Hammon (Amer. Rev. of Tuberculosis, June, 1917) says the initial symptom of invasion in nearly 10 per cent. of cases of pulmonary tuberculosis is hemoptysis. According to Lawrenson Brown, 90 per cent. of patients having hemorrhage from the lungs later develop clinical tuberculosis. A physical examination following a hemoptysis is usually negative from a diagnostic standpoint. The x-ray may be of aid relatively, with clotting shadows and previous knowledge of the case.

Both persistent cough and hemoptysis following the infectious diseases of childhood should suggest a tuberculous invasion and ulceration and a positive diagnosis be sought. The associated signs in an arteriosclerotic or cardiac case will aid in differentiating from tuberculosis. But the value is in possessing the fact of a frank hemoptysis and holding to the variety of other factors, than the tuberculous process, contributing toward the ulceration of an arterial wall.

Sputum.—Frequent examination of the sputum in a suspected case is indicated. However, the absence of tubercle bacilli is only of negative value and when found proves at once the advance and chronicity of the disease. Where history and physical signs are positive the absence of tubercle bacilli must play only its proper part. As Lawrence Brown says, "Absence of tubercle bacilli in the sputum means only that bronchial ulceration has not occurred." Heise and Sampson, from a careful analysis of 235 cases, hold "that there is a type of tuberculous lesion seen in the x-ray plate, which in

all probability has no communication with a bronchial lumen and from which absorption into the blood stream does not take place freely as in the usual type." There are many cases in which no opportunity is afforded to secure infected sputum or blood to confirm the physical findings and x-ray. Hence every reason why we must not wait for the positive sputum. It only confirms what should have been found by other methods.

Temperature.—A daily or afternoon temperature persisting, without evidence of other disease, should cause search for symptoms and signs of pulmonary involvement. Of course a bad pyorrhea, infected tonsils and myocarditis may cause slight daily temperature, but such conditions can be demonstrated and should always be searched for. Temperature, rapid heart and unusual fatigue often clear up on removal of a streptococcal tonsil.

Loss of Weight and Strength.—Persistent or great loss of weight, with fatigue on slight exertion are suggestive signs and typical when associated with other evidence of phthisis.

Pulse.—A rapid pulse, especially one which becomes accelerated on exercise or sudden change of position, should arouse a search for a possible pulmonary tuberculosis. Hyperthyroidism may have to be differentiated in making a diagnosis, as well as certain types and symptoms of cardiac disease.

3. *Physical Examination.*—For demonstrable signs of early tuberculosis in which the sputum is negative, a physical examination affords the most probable means of determination. This should include, under ideal conditions of light and quiet, with the patient stripped to the waist, inspection, percussion, palpation and auscultation. Considering diagnostic evidence of an early or reawakening tuberculous process it has been demonstrated time and again, and is held by the best of clinicians, that the evidence revealed by auscultation will aid more in arriving at a correct diagnosis than any other sign. When air is set in motion through the lung tissues in the presence of fluid, characteristic vibrations or sounds are produced—the râles. Such, when present, persistent, fine and in showers, and heard in certain specific areas as the apices of the lungs are quite diagnostic, irrespective of change in percussion note or palpation signs. For purposes of description and locating the origin of these râles or cracklings, those produced in the bronchi are termed indeterminate and are in the oldest lesion, those in the bronchioles subcrepitan, while the alveoli produce the so-called crepitan râles. Seldom, however, is only one type heard, and to differentiate too closely is at times to confuse. An important point brought out by Bushnell, Goldschneider and Graucher is "that râles are often

present at the apices unaccompanied by alteration in the character of breath sounds, which dissociation is usually evidence of quite a recent lesion" (Diag. of Tub. in Military Service, Col. George E. Bushnell, M. C., U. S. Army, p. 8). The added elements of harsh inspiration and prolonged expiration while diagnostic demonstrate the chronicity of the lesion. It is to be emphasized that in all suspicious cases persistent, moist râles heard at one or both apices, during inspiration are almost diagnostic of tuberculosis. The atelectatic râles, those heard only on the first inspiratory effort and not recurring, are of no significance. Treadeau is credited with a method of bringing out moist râles when difficult to determine, by having the patient "breathe in, breathe out and cough," the examiner listening carefully during the inspiration following the cough. More air is said to be stirred up by such means, setting in vibration any secretion present.

In considering the age of the lesion many factors are to be taken into account, though it can be accepted that the harsher the breath sounds and the more prolonged the expiration, the older the lesion. But just as truly can it be stated that fine moist râles in such an area may indicate a reawakened process on an old lesion.

Marked or characteristic changes in percussion note indicate advanced and chronic fibrous areas. The absence of percussion changes should not lead one to deny tuberculosis in the presence of the persistent moist râles. In fact Colonel Bushnell, Surgeon-General's Office, and his large corps of examiners, put little stress, in the routine examination of large numbers of troops, on the physical signs other than auscultation, though each method is used systematically and in the suspicious cases used for comparison or confirmation. But in the large number of drafted and enlisted men percussion and palpation yield little if any assistance.

Not infrequently in going over a chest moist râles are heard at the bases of both lungs. But it is very rare that such are tuberculous if the apices are clear, and no other clinical signs of tuberculosis are present. Deeply folded layers of pleura at the bases on deep inspiration will often produce sounds suggestive of râles, but no other local physical signs are present.

At the angles of the scapulae, at the sternoclavicular junction and along the border of the sternum at times, during the respiratory effort, cracklings are often heard and confuse. Usually by change in position, by raising the arms or stretching them over some object they may be made to disappear or change in character. Not true if tuberculous râles. Lieutenant King at Fort Oglethorpe last summer (Mil. Surg., January, 1918) noted the disappearance on change in position of adventitious sounds in 73 cases

yielding signs out of 819. His interpretation concurred with the opinion of the other examiners.

The X-Ray.—The part that the x-ray should play in diagnosis, especially early, is problematic, even though some are putting great stress on its value. Knowing the varying normal densities of lymph structures, blood vessels and pulmonary tissues, we have something to start with, and the x-ray appearance of some pulmonary pathology is known. It is doubtful if early discrete tubercles can be differentiated. The conglomerate in form of tuberculous glands or caseating area may be diagnosed, however, with justice. But of course here we are dealing with the advanced or old case. Likewise the old cavity with fibrous periphery can be differentiated, and, in old or recurring tuberculosis, will assist materially in diagnosis, as in a recent case discharged from the service.

Heise and Simpson (Amer. Rev. Tub., February, 1917) believe that a true peribronchial lymphatic tuberculosis may be distinguished by the x-ray. This in contradistinction to the parenchymatous or alveolar type with characteristic physical signs.

In x-ray diagnosis, searching for a tuberculous process, much time and assistance come from our knowledge of the probable early localization, in an upper lobe, usually its apex, and if very early, commonly in one apex. In most other diseases of the lungs, the involvement is usually bilateral, and at the bases. These facts should always be borne in mind in the recent or doubtful cases. In the old, disseminated, healed type, with many sclerosed tubercles, and in the second stage of the rapidly progressing type, the mottled, moth-eaten appearance of the plate is striking. The physical signs and history aid in diagnosis here. The marked change in density of old healed or recurrently involved apices is striking, and with careful interpretation and improvement in developing plates, will undoubtedly be of great assistance.

The note to bear in mind is that the x-ray may assist with positive changes, but the x-ray laboratory is not the place to establish diagnosis.

Tuberculin and Serology.—When positive the laboratory assistance to diagnosis is very great, but in localization or for purposes of furnishing absolute proof, we must be conservative in our expectations. In the first place in all closed cases of tuberculosis, sputum is negative. The tuberculin test is practically valueless in the adult as to indicating location or degree of activity, the old, as well as early, lesions reacting. According to Lawrenson Brown, a positive reaction in a child under two years indicates an active process, but in agreement with the pro-

fessional in general, it is not of significance in youth or adult as to early or old healed cases.

The complement fixation test is as yet too new and uncertain to place value on in establishing a diagnosis by itself. However, its future use with other blood work may in time add to one's means of diagnosis in the early case.

PROGNOSIS

The prognosis of chronic pulmonary tuberculosis is practically the same as it has been for years, probably due to two specific reasons. First, that an early diagnosis is made in too few of the cases, and second, the known means of prophylaxis and treatment are not generally enough instituted and carried out in the individual cases.

In order that we may have a more favorable prognosis, we must both as profession and laymen, accept a classification for diagnosis and treatment which is practical and scientific, namely:

1. Early, incipient or first stage.
2. Moderately advanced or second stage.
3. Advanced or third stage.

True cures rarely follow among the advanced cases, though some chronic, open cases, rich in infected sputum, and a menace to others, may live on and finally die with other disease.

The very fact that at autopsy such a large percentage of lungs reveal healed tuberculous scars, ranging in opinion of observers as from 50 to 100 per cent., demonstrate the "infected human" has resistance to early invasion.

The State Sanatorium of Missouri reports on 1,056 adult cases discharged from that institution, between the years 1912-1914. Of these cases on admission, 17 per cent. were incipient, 36 per cent. moderately advanced, and 47 per cent. advanced. In April of this year (Hawes, *Amer. Monthly Tub.*) 316, or 30 per cent., were well and at work.

From Washington University, St. Louis (Hemplemann, *Amer. Rev. Tub.*, April, 1917), a careful investigation of 130 tuberculous cases, under two years of age, revealed that 64 had died. Of the 66 still living 30 were known to have lived one year after a diagnosis was made. Of the 64 dead, 78.7 per cent. lived less than one year, 57.4 per cent. lived between one and two years, and 68 per cent. lived two years. Pollok of Vienna (*Beitr. z. klin. d. Tub.*, v. 19) gives from his observation and study a mortality of 67.2 per cent. on children between one and three years.

Such observations in general reveal the very unfavorable prognosis among babies, and indicate the early removal of all children from unfavorable surroundings leading to first and continued exposure.

Both as regards private and sanatorium prac-

tice, and in connection with the numerous problems developing out of the presence of the tuberculous in the various armies of the war, it is recognized that we shall have to treat the infected and diseased individual in a different manner than in the past. And the problems are medical, social and industrial, and as such must be met. Education among all classes must be taught and the government must establish, under the Surgeon-General's Office, the standards of living and the system of treatment for the ill. Sanitary laws based on our knowledge must be enforced, regardless of the individual's desire or the family or sect's wish or belief. Segregation of the open, early or advanced case must be complete up to proof of it being a closed case. Those diseased should, according to the stage of activity or area involved, be placed under treatment indicated for the particular class. The advanced, open case should never be placed in sanatoriums with the early and hopeful cases, but in special isolated hospitals, and for life, or until they can be proved closed cases. The early case should be given special consideration, and as belonging to a class, it were better to advise a sanatorium for the purpose, under system, of learning how to live. It should be accepted and emphasized that the early case needs at least three years of special regime, rather than three months as so often advised. Arrest may be brought about in this time and habits established for life.

Occupation and outdoor life, even continuing at trade, are excellent where periodic clinical observation can be made, as in dispensary or agricultural sanatoria. In many cases of good resistance, but with distinct physical signs, this is possible by simply noting pulse, temperature and phenomenon of fatigue. Such signs contraindicate effort or pursuance of occupation. England is doing more practical work along these lines than any other country, having established dispensaries in the main factories and industrial districts and carrying out such a plan of procedure on the tuberculous workmen.

Likewise, in the training camps and armies of the belligerent nations today, such a system is being carried out in case of chronic, healed, fibroid tuberculosis and the early case without subjective signs. Endurance and improvement are following in many individual cases, as illustrated at Georgia and other training camps and even among individual cases in active service at the front.

As to our future. At present some of the nations involved in this war are establishing colonies, and it is recommended that the system become general, on declaration of peace, so that those suffering with pulmonary tuberculosis may, if possible, be cured, but above everything that the spread of the white plague may be checked.

That the diagnosis hereafter in pulmonary tuberculosis be made early and that the prognosis be what it should be, the profession must individually and collectively get out of its rut of inexactness and superficiality and establish diagnosis, and support all rational therapy and legislation looking toward a more favorable prognosis.

Rialto Building.

DISCUSSION

DR. G. C. ROBINSON, St. Louis: The early diagnosis of tuberculosis is of course thoroughly recognized as the most important fact in the treatment of tuberculosis. It is not only important but it is difficult and it is serious. Being both difficult and serious every care must be taken. One point that seems to me of great importance in the early diagnosis of tuberculosis is the universal suspicion of tuberculosis—slight loss of weight, pains in the side, a cough, and afternoon temperature—just one of these symptoms should always arouse suspicion and the case must be held under suspicion until it can be proved nontuberculous.

Another point which is of great importance in the diagnosis is prolonged observation. A case may be held under suspicion and cannot be proved, but that case should be followed very carefully, almost from day to day; the patient should follow his own temperature, the weight should be watched, the symptoms noted and after a period of several weeks perhaps a diagnosis may be reached as to whether the patient is tuberculous or not.

I have been very much interested in following young women in the training school of Washington University, where we have about 120 nurses. We so often see very vague symptoms that bring them under suspicion, but by daily temperature and constant weighing and following them very carefully we can often say after some days or weeks that they have or have not tuberculosis; but it is a very difficult problem to say at one examination whether the early case is or is not tuberculosis.

The interpretation of early physical signs is difficult. One of the best men on tuberculosis in this country told me that he went over the record of a case that had been examined by four good men. One said there was tuberculosis in the right apex; another said it was in the left apex; another said it was in both apices and the fourth said there was no tuberculosis. So that shows the difficulty of interpreting the physical signs taken alone, and the general course of the case must be followed very often from day to day and week to week before a definite conclusion can be reached. Then so often the whole life of that individual must be changed and as I said before, it is a very serious and difficult problem.

I want to emphasize the point that Dr. Child brought out, that is the so-called latent rales, the presence of rales following coughing, during inspiration and sometimes during expiration. Frequently rales can be brought out by the cough that are not there on ordinary respiration.

And finally I want to emphasize one other point, and that is the importance of considering the individual as a whole—tonsils, teeth and all other foci of infection that may produce temperature or any of the early symptoms of tuberculosis. These should be very carefully ruled out and although this is a subject which has been spoken of very frequently it seems to me that the question of pulmonary tuberculosis should be frequently discussed because it must be in everyone's mind when the patient is seen in order to rule out or confirm the diagnosis at the earliest possible moment.

DR. H. M. CLARK, Platte City: There is one thing the general practitioner would like to have, and that is a new and better method; a plain specific method of diagnosis. We must have something that is not roentgen ray or laboratory work, we must have some method by which the average physician can tell within one or two visits to his patient whether he has tuberculosis. The last gentlemen said that they must be kept under observation. Of course if we could do that we could diagnose tuberculosis, but when they are ready to stay with the physician they are generally so far along that it is too late to help them. But if we could find some method, and it looks to me as though the leaders of the medical profession should be able to accomplish that—some method, so that the plain country doctor can tell incipient tuberculosis like he can malaria, then you will have a cure. But when you have to take them to a specialist it is too late and here I wish to make a broad statement—I believe there is no specialist that can tell any more about it than the average physician unless he keeps at it all the time. You must become accustomed to this examination and keep right after it. There are three classes of people—well-to-do, the middle class, and the poor people. The well-to-do will stay with the doctor, but you take a man who has to work for a living and has a big family, if the child takes sick he takes it to the family physician and he examines him; the child does not get better and he brings him back, one or two times, but finally he just lets the child die. There must have been some time when this child could have been cured easily, but when the specialist gets them it is too late to help them. When you say they are "tubercular" that does not explain it, but if we could say he has tuberculosis, that would be like holding a match to a barrel of gasoline, you would get action. Somebody find out how to tell tuberculosis the first visit.

DR. HERMON S. MAJOR, Fulton: In our work in the Insane Hospital at Fulton, of course we come in contact with tuberculosis to quite an extent. Last fall we gave the von Pirquet test to 480 and of that number 67 per cent. reacted. Last winter we did forty-six necropsies and we did not find a necropsy that gave a positive von Pirquet but what we found tubercular signs present. It is our purpose to carry this work still further. We are examining the sputum of these patients as well as carrying out the clinical work and we expect to carry on this work and find out if all of the positive von Pirquets will be confirmed at postmortem. My von Pirquets did not run as high as some. Some men have run as high as 80 and even 75 per cent. You will understand these patients are not supposed to be tubercular patients; they are simply routine cases. They were all women patients because I have charge of the female department.

I might add also that in the last two years our staff has done something over 3,000 Wassermanns and there seems to be a relationship between the Wassermann and tuberculosis to some extent. Quite a large per cent.—I think between 9 and 12 per cent.—of our tubercular patients were positive. Some authorities have stated that a tubercular patient will throw the Wassermann to the positive. Others have questioned that. That is a disputed question at this time, but we have not gone far enough in our research work to give you any definite information regarding that point. It is very interesting that in these necropsies we found the old tubercular scars which showed that tuberculosis previously existed, and the patient affected entirely recovered, because the majority of them did not die of tuberculosis, but died of something else entirely foreign to tuberculosis; so it shows that in a great many cases tuberculosis has healed apparently spontaneously. We expect to carry this work out, and at some future

time I want to prepare a paper showing the outcome of our findings in this work.

DR. T. GUY HETHERLIN, Louisiana: I think it simmers down to the fact that the general practitioner of average intelligence can diagnose tuberculosis, but he cannot do it on the jump; he must see the patient and thoroughly examine him and have the sputum examined. The making of a correct diagnosis is of the utmost importance, not only to the patient but to many others, because these patients disseminate it. I have been trying to get some of them to the State Sanitarium but some of them do not want to go. One fellow got homesick and he is dying right now. I had another fellow I wanted to send down but he ran away. We must be firm with our patients and be honest with them.

DR. O. H. McCANDLESS, Kansas City: I do not wish to prolong this discussion but one of the factors that has been mentioned repeatedly is the roentgen ray and its position should be established rather definitely. The question is not so much one of diagnosis as the question of immunity. The degree of immunity may be determined by the scars that wall off the apical infection that is found; secondary infection in the middle lobe may be determined with the ray, and the amount of calcification may be determined. It has been determined by Wallace as a factor of very great importance. They have their mortality statistics on something like 3,500 patients whom they have segregated, determining first their degree of immunity and separating them into groups. A certain percentage having an expectancy of two years, or three years, or five years, or seven years. This has been worked out definitely. When a report of the death of a patient is made to the institution it is checked by the superintendent. In this way they have established a definite line of procedure for determining the degree of immunity. Immunity is the question rather than diagnosis. The speaker who referred to clinical findings as means of diagnosis was unquestionably correct. It is in the hands of all of you and you do not need the roentgen ray, although in it you have a material aid in the prognosis and in determining the degree of calcification. Indeed the roentgen ray is one of the most important factors in determining prognosis. But the fact that you have the roentgen ray does not make your prognosis. The individual who has had experience in interpretation, and record of mortality statistics and has been following them over a long period of years is able to give a prognosis that is very valuable.

DR. S. P. CHILD, Kansas City: I appreciate the discussion of this subject. It is a most vital question to the whole nation. As pointed out by Dr. Boisliniere, the question of diagnosis is in the hands of each individual physician. One thing of importance to all of us at present is the remarkable observation on the drafted men in the U. S. Army. What I can state from experience last summer at Fort Oglethorpe is true, I understand, in the United States as a whole. A certain established system of observation as recommended by Col. George Bushnell, U. S. Army, was carried out by the Tuberculosis Board for a period of two months, and it was discovered that in less than 1 per cent. of cases was a diagnosis of tuberculosis justified. We had every opportunity at our command, the isolation in special ward, recording of temperature, frequent examinations of sputum, and observation by the roentgen ray. One hundred and fifty-six out of the twenty-two thousand men were diagnosed as tuberculous. In Kansas City among a different group, inasmuch as they were the men who came up for enlistment by draft, 1 per cent. was diagnosed tuberculous. In comparison with tuberculosis existing in the French Army we must feel that the United States Army starts out with increased efficiency and resistance, which speaks well for our men now going to France.

THE HODGEN SPLINT IN THE TREATMENT OF FRACTURES OF THE FEMUR*

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During the civil war, Dr. John T. Hodgen was surgeon-in-chief of the St. Louis City Hospital, which institution was then caring for wounded soldiers. Finding great difficulty in dressing wounds on the back of a fractured thigh or leg without discomfort or danger to the patient, he designed his original cradle splint,¹ consisting of four horizontal wooden rails attached to a foot piece, from which extension could be obtained by means of a weight and pulley at the foot of the bed. The upper two rails supported a series of canvas strips, so adjusted as to form a smooth cradle in which the entire limb was placed. One or two strips near the wound could be unpinned, and the dressings changed without disturbing the limb. He states later² that he got the idea of the canvas cradle abroad and then³ combined it with the idea of Smith's anterior wire splint and Swineburne's (now better known as Buck's) extension. He later added a tent block to the long suspension cord and self-adjusting pulleys to the supporting cords next to the splint. In 1866, he resigned the adjustable splint of square rods and square hollow tubes much in use today. There have been no real improvements since.

The effectiveness of the suspension extension splint is due largely to the following facts:

1. The thigh and leg, both slightly flexed, are thereby placed in the position of greatest physiologic equilibrium between the flexor and extensor muscles, neither being wholly relaxed nor extended.

2. Constant extension of any desired amount necessary to overcome a likewise constant muscle pull which either shortens or angulates the bone, is readily obtained by making the suspension cord oblique to the extent of 5 to 30 degrees from the perpendicular. Then the constant force of gravity represented by the weight of the leg, acts as a continuous extending force, the resultant of these two being a direct pull in the long axis of the femur. With Buck's extension, the double inclined plane and similar appliances, in which traction without suspension is used, the weight acting over the pulley

* Read before the Missouri State Medical Association, Sixty-First Annual Meeting, Jefferson City, May 7, 1918.

1. Hodgen, J. T.: A New Appliance for the Treatment of Compound Fractures of the os Femoris, *Am. Med. Times*, May 23, 1863, p. 245.

2. Hodgen, J. T.: On Fractures, *St. Louis Med. and Surg. Jour.*, 1871, p. 148-153.

3. Hodgen, J. T.: On the Treatment of Gunshot Fractures of the Femur and Tibia, *St. Louis Med. and Surg. Jour.*, 1864, 20, p. 17-21.

must work against the weight of the leg and overcome the friction between it and the bed before it can use an ounce of actual extension.

Casts and long rigid splints cannot maintain a constant degree of extension, due to shrinkage of the parts which inevitably occurs.

3. The entire leg, thigh and hip move with the patient's body as one unit, the fragments remaining aligned and motion taking place in the hip joint normally as long as sufficient extension is kept applied. This principle applies

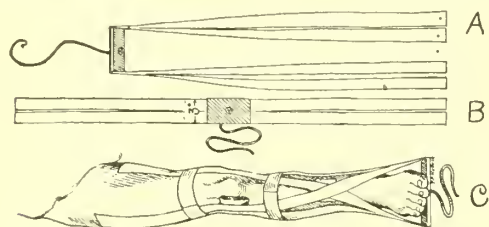


Fig. 1.—A. B. Adhesive strip with spreader attached, ready for application to limb. C. Same applied. Spreader just keeps adhesive from touching malleoli.

to any freely movable joint as a ball and socket joint, and it is the one, I believe, most difficult of comprehension by the average physician. He cannot see why two fragments of bone could remain in apposition unless there is some rigid splint or cast closely applied. This principle is utilized also in the overhead method of treating fractures of the femur in children. A simple experiment will clearly demonstrate its effectiveness: tie a piece of cord to each end of a short slender wooden stick, break the stick and attach several rubber bands extending above and below the break, tight enough to cause the ends to overlap an inch or two. Now apply extension by pulling on the strings until the fragments come into line and the stick is of its original length. As long as this amount of extension is kept applied, either or both hands may be moved about at will and the stick still remain in perfect alignment, the flexible cords here acting as freely movable joints. Should the stick be heavy and tend to sag at the break, a slight support beneath it would be necessary. Now lay the stick firmly on a pillow or mattress, maintain the same amount of extension as before, and move either hand, holding the cords at the ends. The friction on the bed or pillow will cause the stick to bend at the site of fracture, even though the proper amount of extension is kept applied. This same thing happens every time the patient moves his body while he has a Buck's extension apparatus or similar appliance attached, causing much pain and displacing the fragments, due to the rigidity with which the lower fragments are held and the friction against the bed. With the limb supported and suspended, there is no friction to displace the fragments.

4. Any desired amount of abduction⁴ may be kept constantly applied by swinging the support well beyond the side of the bed.

5. Dressings on any part of the limb can be changed without disturbing the fracture in any way, by merely dropping one or two strips at their outer end.

6. No anesthetic is necessary to apply the splint and no process of "setting" the fracture is required, as the traction overcomes both the strong spastic contraction of the muscles due to irritation or to injury which is normally of only a few days duration, and also the less strong but constant pull due to muscle tonus.

7. The limb can be kept cool, may be inspected, cleansed, massaged, and passive motion given to all joints as often as necessary. The circulation and nutrition of the limb are thus maintained and there are no ankylosed joints nor pressure sores to contend with.

8. It is far more comfortable than any other splint and the end results are better than by any other one method.

I shall now give in detail the methods of preparation, application and adjustment of this splint.

On a bar of soft iron $\frac{1}{4}$ or $\frac{5}{16}$ inches in diameter, measure on the sound leg for the

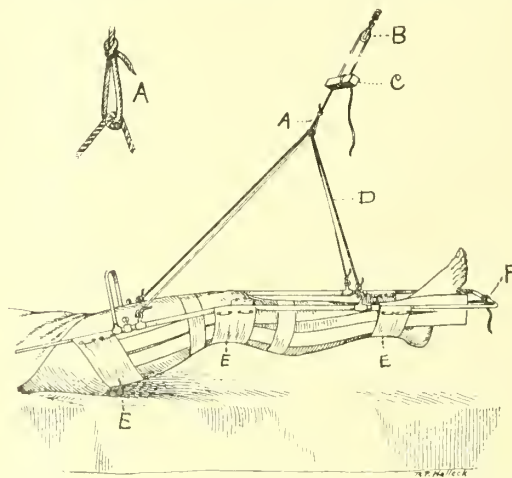


Fig. 2.—Limb temporarily suspended ready for permanent canvas strips. A. Manner of passing cords through loop to prevent slipping. B. Pulley from support or ceiling (small section of long suspension cord shown). C. Tent block for adjusting cord. D. Short suspension cords from hooks on splint passing through loop at A. E. Temporary canvas strips supporting limb in proper position. F. Traction cord from spreader and adhesive, tied to cross bar of splint. All pull is transmitted from splint to leg through this cord.

mesial arm, the distance from the symphysis pubis to 6 inches beyond the foot, bend at right angles twice, forming a cross-bar five to eight inches long, varying with the width of the foot and ankle, and cut the lateral arm about the crest of the ileum. Turn the splint over and

4. Whitman, R.: *Ann. of Surg.*, 1911, 53, p. 490; also *Lancet*, London, 1913, 1, p. 1649.

bend both bars at the knee to an angle of 15 degrees below the horizontal position. It will now fit the injured limb. Near the proximal end, fit a semicircular cross-bar whose radius is two or three inches greater than the width of the leg. Four hooks for the supporting cords are made from doubled heavy wires wound around the bars, the two proximal ones placed half way between the knee and the groin; the two distal ones midway between the knee and the end of the splint, all being fixed in place by a few wraps of adhesive plaster.

To hold the leg to the frame, adhesive strips are applied as in Buck's extension, or else a strong gaiter fastened about the foot, if adhesive cannot be used. Shave the limb if necessary. Measure off the proper amount of adhesive, $2\frac{1}{2}$ or 3 inches wide, in one piece, extend-

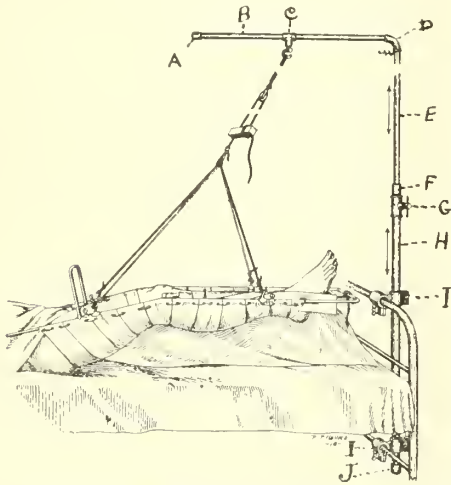


Fig. 3.—Splint completely applied and limb properly suspended. Illustration shows author's adjustable support for this splint or any other condition where suspension is needed. Bed can be moved without disturbing position of limb. A. $\frac{1}{2}$ inch end cap. B. Horizontal arm of $\frac{1}{2}$ in. double strength pipe 3 ft. long. C. Sliding T with hook setscrew. D. $\frac{1}{2}$ in. elbow. E. Sliding vertical post, $\frac{1}{2}$ in. double strength pipe, 5 or 6 ft. long. F. 1 in. pipe, 2 in. long. G. 1 in. T with setscrew to hold vertical pipe in any position of height or rotation. H. Vertical post of 1 in. pipe, $4\frac{1}{2}$ or 5 ft. long. I. Universal clamps size $1\frac{1}{4}$ in. (Mfd. by Smith & Davis Mfg. Co., St. Louis). J. 1 in. end cap.

ing from near the groin to 3 inches beyond the foot and back nearly to the trochanter, or if the break be lower down, the adhesive strips should extend nearly to the site of fracture. At the center of this strip place a block of wood, $\frac{1}{4}$ inch thick, as wide as the adhesive and $1\frac{1}{2}$ or 2 inches longer than the distance between the malleoli, and having a hole in its center for the cord which fastens it to the cross bar of the splint. This wooden spreader serves to prevent the adhesive pressing against and excoriating the malleoli and also equalizes the pull on the entire width of the adhesive strip. This block is held squarely with the sole of the foot, about 2 inches from it, and the strips applied evenly and smoothly along the sides of the limb with

the knee slightly flexed and a cotton pad over the head of the fibula to protect the peroneal nerve from pressure. Two or three circular strips 1 or 2 inches wide, or a snug bandage may now be applied around the limb to make the lateral strips fit closely. There must be no creases or folds in the adhesive, else excoriations of the skin will occur under them.

The lateral strips will often fit better if they are split on each side nearly to the spreader, the lower halves applied as above, and the upper halves crossing about the lower third of the leg and extending up on the opposite side just above the lower strip.

The iron frame is now placed in position over the limb so that the knee is at the bend. The spreader cord is tied to the cross bar. Three temporary supporting cloth strips are now applied, one near the hip, one under the knee and one under the ankle; all tightened so that the top of the leg and thigh are level with the bars of the splint. The supporting cords are now attached and the whole suspended so that the leg below the knee is horizontal. The uppermost strip is permanently adjusted by being repinned to the mesial bar as high up as possible, and extends outward and upward along the gluteal fold to the lateral bar, the ends being folded over the bar toward the leg, and pinned. Permanent muslin or canvas strips 4 or 5 inches wide are now similarly applied from above downward, the upper edge of the lower strip overlapping the lower edge of the strip above it for about an inch. The angle or bias at which the strips are applied is such that both edges have the same tension and all the strips form a smooth snug bed for the limb, make it comfortable and preserve its normal contour. A single piece of cloth or strips applied in any other manner cannot be applied so smoothly, and of such even tension.

The limb should lie in the center of the splint, and the inner edge of the thigh, knee and great toe should be in the same, nearly vertical plane. The foot should lie at right angles to the leg to prevent toe drop. Should the splint list to one side, shorten the cords on that side or otherwise adjust them so that the leg is horizontal and swings free about six or eight inches above the bed. To prevent the cords attached to the splint from being disarranged easily, I thread them twice through the loop on the end of the long cord from the high pulley on the support or in the ceiling and carry the other end to the opposite side of the splint. Adhesive strips at their upper angle will also prevent them changing their position. A tent block on the long cord makes it easily adjusted. Should this cord be less than 8 or 10 feet long, a spring attached at one end makes it more elastic and adds to the patient's comfort. If there is no shortening, suspend the limb vertically, other-

wise adjust the pull at an angle varying with the amount of extension necessary to keep the limb the same length as the uninjured one, which fortunately is the exact amount necessary to relieve the patient's pain. Should the patient slip toward the foot of the bed, raise the foot of the bed six or eight inches.

To secure proper abduction swing the limb as far as necessary over the side of the bed thus bringing the lower fragment into line with the upper one, over which we have little or no control, especially if the fracture involves the neck. Fit a pole lengthwise of the bed so the patient may pull himself up when using the bed pan or for exercise.

The after treatment consists of frequent massage and passive motion to the knee or ankle, occasional adjustment of the cords and canvas strips, and measurements of the two limbs, the sound limb always flexed exactly the same amount, or else the splint lowered to the bed, before measurements are taken. Strong extension will restore a shortened limb even after a three weeks' callous has formed.

The splint should be left in place about six weeks and then one or two more weeks pass before the patient walks. However, a plaster cast may be applied after the fifth week and the patient walk sooner if desired. Under any circumstances the sound foot should be fitted with a shoe having a sole $1\frac{1}{2}$ inches thick and crutches used; no weight being put on the injured bone for seven or eight weeks.

The Hodgen splint properly applied and adjusted is well adapted to most fractures of the femur, and some compound fractures of the leg, and gives admirable results, although other appliances, of course, have their own field of usefulness. This splint does require constant attention and is not well adapted to young children or even unruly and obstinate adults who are wiser than their physician.

To avoid unsightly pulleys in the ceiling and permit the fracture bed to be moved about the room or ward at will I have designed a support which attaches to the foot of the bed frame, free from the floor and permits of any degree of abduction or obliquity of the suspension cord. It consists of two universal clamps, holding upright to the bed, a 1 inch pipe 4 feet long, provided with a cap at the lower end, and above having a short nipple and "Tee" fitted with a thumb screw. Into this pipe slides a vertical piece of $\frac{1}{2}$ inch double strength pipe 6 feet long fitted above with an arm 3 feet long placed horizontal or at an angle of 45 degrees as desired, on which slides a hook for the pulley through which the cord passes. Various similar supports have been designed, but I believe this one is more convenient and satisfactory than any I have yet seen.

5952 Romaine.

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8. Robinson, G. C. F.: Hodgen's Splint in Private Practice, *The Practitioner*, 1909, 82, p. 423.
9. Brady, Wm.: The Hodgen Suspension Treatment of Fracture of the Femur, *N. Y. State Jour. of Med.*, 1910, 10, p. 422.
10. Sharpe, N. W.: A Survey of the Modern Conception and Treatment of Fractures of the Femur, *St. Joseph, Mo., Med. Herald*, 1910, 29, p. 469.
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12. Carmichael, F. A.: Experience in Fracture Treatment by Means of the Suspended Splint, *Internat. Jour. of Surg.*, 1912, 25, p. 187.
13. Eve, Duncan: The Treatment of Fractures of the Femur with Hodgen's Splint, etc., *Am. Jour. of Surg.*, 1916, 30, p. 217.
14. Beasley, G. F.: The Evolution of a Splint for the Femur, *Jour. Ind. State Med. Assn.*, 1917, 10, p. 276.
15. Blake, Jos.: Suspension with Extension in the Treatment of Fractures of the Limbs, *Am. Jour. Orth. Surg.*, 1917, 15, p. 644.

THE HODGEN EXTENSION SUSPENSION SPLINT*

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The exigencies of the Civil War developed through the genius of one of our greatest western surgeons, a new type of splint for the treatment of fractures of the femur which has never been surpassed. It was the mechanical ability, inventive genius and the thorough knowledge of anatomy and physiology possessed by John T. Hodgen which produced the Hodgen splint. It meets every requirement in the treatment of fractures of the femur, both simple and compound, better than any other appliances and at the same time excels all in its extreme simplicity. Why so valuable an appliance failed to become generally popularized after more than fifty years, is hard to fathom. Those who are familiar with its proper use are always enthusiastic advocates of it. Some of the causes of lack of knowledge of the Hodgen splint may be such as a general lack of interest in fracture work by surgeons after the war, sectional prejudices in a feeling that nothing good may come out of the west, and empiricism making an *ipse dixit* against which was a fear of legal complications if one should depart from established practices.

One needs only to examine the texts on fractures to note the general lack of understanding of the Hodgen splint. It is a subject that is now most timely because a thorough knowledge of the principles of treatment embodied in this splint would go far in improving the end-results

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in the great war surgery. A study of the appliances for treating fractured femurs in our war hospitals is most interesting and it is to be noted without exception that those appliances are the best which most nearly approach the Hodgen splint. One will not fail to notice what stupendous efforts and what complicated mechanical appliances have been devised to obtain extension, suspension and other factors secured in the Hodgen splint most simply. Every appliance so far noted has fallen short of the Hodgen splint and in none of them is there anything which may not be had in the Hodgen splint and may be obtained better and more easily.

The Hodgen splint is not peculiarly a war splint, for it is equally efficient in treating simple fractures of every part of the femur. This impression obtained after the Civil War and was another cause, no doubt, for its not coming into general use. But it was so admirably adapted to the treatment of compound and gunshot fractures, its equal efficiency in treating simple fractures, and its use in civil practice was allowed to lapse for the lazier methods of Buck's extension and sand bags, a plaster cast, or a double inclined plane.

The surgical war reports show numerous devices, and many of them excellent for the treatment of fractures of the femur and the great lacerated infected wounds of the thigh. Indeed great advances have been made, and the excellency of treatment by the new appliances has been best insofar as the essential principles of the Hodgen wire cradle intra-extension splint have been followed.

Now, what are the most essential and most valuable principles involved in the Hodgen splint which make it peculiarly a war splint? In the first place it is a wire cradle splint. In other words, a splint in which the limb is immobilized and suspended between the rods on either side of the limb by hammock slings. The great advantage of this type of splint is the accessibility of the limb. It is open for inspection always and anatomical form and symmetry may be noted and secured. The maintenance of anatomical form is almost synonymous with good results. Care of muscles and soft parts is an essential factor even in simple fractures, and this is much more easy than in other types of splint. Dressings and the treatment of septic wounds by irrigations, is made easy. Roentgen-ray examinations are much facilitated, and the general comfort of the patient is greatly increased over old types of splints. The war literature indicates that this is the most popular type of splint for the reasons enumerated above. The Groves wire cradle splint and the Blake splint are examples of this type.

The principle of suspension is also of much value and is embodied in many of the war

splints. Suspension above the bed facilitates irrigation and easy dressing of wounds. It also mobilizes the patient making for greater comfort and therefore contributes much toward recovery. A sling to the so-called Balkan frame or a Thomas or Blake splint suspended are examples of the types used these days. The principle of suspension was first used by Nathan R. Smith in his suspension splint during the Civil War. John T. Hodgen adopted this principle in his splint, and in addition added the most essential of all factors in treatment which is extension. This extension in the Hodgen splint was intra-extension or within the splint and was made by a Buck's appliance fastened to the bottom of the splint. Any desired amount of extension is then obtained simply by the amount of inclination in the suspending cord, the resultant force between this and the Buck's intra-extension being the amount of extending force on the thigh. Counter-extension is made by gravity by simply raising the foot of the bed. Many of the suspended splints make separate extension and not intra-extension. Counter extension may be made by pulleys or the ischial pressure of a ring around the hip such as the Thomas type of splint. These additional devices do not make better extension and counter-extension, but rather poorer, and also limit the mobility of the patient. Counter-extension by ischial or perineal pressure is never so efficient and much less comfortable. This matter of the patients moving about in bed is a matter of much consequence, and makes largely for good recovery. It is of inestimable value in the aged.

The original Hodgen splint did not overlook another point of consequence, and that is flexion of the limb at the knee and hip. This flexion is most necessary and physiological because it is the position of most perfect muscle rest. Hyper-extension of the muscles makes paralysis afterwards and contributes much pain to the patient at once. In considering end results and restoration of functions as well as repair of the bone, this is a matter of great consequence.

The Hodgen splint permits full mobility of the hip joint. This means that the patient's limb is mobile as well as the patient himself. This permits free movement in the bed, and sitting up, adding very much to his comfort and making nursing care easy. No force may be transmitted to the site of fracture for the perfectly mobil ball and socket hip joint with a radius of motion from the center in every direction can not transmit any force. This can not be in a hinge joint.

After understanding all the principles of treatment fulfilled by the use of the Hodgen splint, its application becomes simple and easy. No extraordinary mechanical sense is needed, and one fails only when he does not understand the several things accomplished by the proper

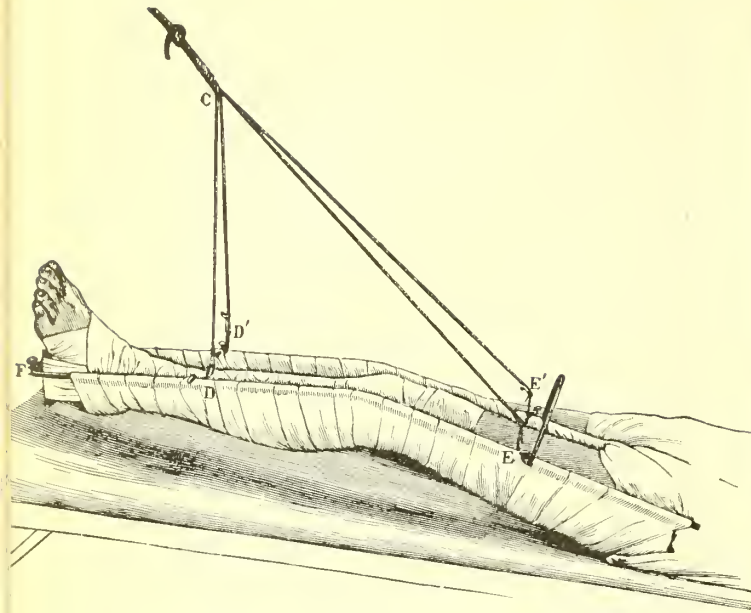


Fig. 1.—The Hodgen extension suspension splint.



Fig. 3.—Shows the splint applied with the inclination for extension. The scale shows a pull of 50 pounds making a suspending pull of 25 pounds and an extending pull of 25 pounds.



Fig. 2.—Shows the splint applied with a spring scale measuring a weight 25 pounds. Vertical suspension and no inclination of cord to make extension.



Fig. 4.—Illustrates the use of Dakin's solution in the thigh.

application of the splint. It is true there are several refinements that may be used in its application in the way of mechanical devices, but when the surgeon has a thorough understanding of the principles involved in the treatment he will make the appliance meet the demands of the case. Making the splint from a rod of heavy malleable wire or iron is very easy, and anyone may do it with elementary mechanical instincts. Or he may instruct a most indifferent blacksmith to do it. Iron rods

direction of the suspending cord. Intra-extension by the Buck's appliance or by adhesive plaster without the spreader block is made either at the foot or knee. A double inclined plane may be had by bending the splint at the knee to a right angle, and this is especially applicable for a fracture just above the condyles. More important still for war service is a modification of the Hodgen splint which may be used for transport. The Thomas splint seems now to be the one most used. In the Thomas splint the counter extension is made by the pressure of the ring against the tuberosity of the ischium, and the foot is extended to the bottom of the splint. To apply this splint the limb must be raised and passed through the ring entailing considerable handling and danger of doing additional damage. Groves' wire frame seems more practical. The Thomas double frame by Jones is of much value, no doubt, but an apparatus too large for hurried transport use. A modified Hodgen may be much more easily applied and can be stacked in ambulances in small space in any required number. This is a consideration according to Groves which is of prime importance and must not be neglected. A modified Hodgen splint for transport use is most easily devised and applied with the greatest facility. The dimensions of the splint should be slightly larger and the spreading arch should reach from the inner bar at the perineum over the thigh to the outer bar opposite the trochanter, the outer bar being six inches longer than the inner one. Slots for straps should be at the ends of the outer and inner bar and a padded strap passed under the thigh and buckled completes the ring for counter extension and support. Extension is made at the foot with a clove hitch or adhesive as may be most convenient. The limb is supported by a few slings as in the Thomas or Blake splint. First aid dressings are applied when the clothing is cut away. No device could be more quickly applied, and when the destination is reached no device is as good for permanent service, for simply by suspension and gravity counter-extension we have the true Hodgen splint. In other communications with more detail we hope to exemplify the Hodgen splint more perfectly. It suffices now to enumerate simply the principles of treatment which it meets most perfectly and its adaptability and great usefulness in both civil and war service.

1. It immobilizes the site of fracture.
2. It produces the necessary extension, and extension is the most important factor to be considered in the treatment of long bones.
3. It secures suspension, which is of great value in wound treatment as well as making much comfort for the patient.
4. It secures physiological flexion at the knee and hip, preventing muscle stretching and paral-



Fig. 5.—Looking down through the hip. The patient's hip is projecting over the edge of the bed. The free mobility of the patient permits the easy use of x-ray examination.

about $\frac{3}{16}$ inch gauge is most suitable. For transport and other modified forms more skill and heavier material may be required. Many modifications of form may be used to meet the indications of the case in hand. The splint may be widened at any part to make wounds more accessible and dressings easier. Intra-extension with the preservation of complete mobility of the limb may also be secured when using Steinmann's pin or Grove's clamp to make extension. Abduction is obtained most easily by the

ysis and also pain. Much comfort is gained for the patient.

5. It mobilizes the limb and the patient as well, so he may sit up and move about in the bed without injury. This is a very important factor, especially in the aged.

6. It is applicable to every form of fracture from the neck of the femur to the foot, both simple and compound.

7. In emergency work and as a transport splint a modification of the Hodgen splint may not be excelled.

DISCUSSION

DR. R. M. SCHAUFFLER, Kansas City: It is a good thing to have the Hodgen splint called to our attention, and anyone who has given it any thought knows that what these gentlemen say is all right. All I want to say is to commend it, except in this one particular, and that is that the Hodgen splint is awkward for a transport splint. The doctor showed a modified caliper type, with a firm band that stretches underneath the thigh. There is no use of fooling with that when we have the Thomas or Jones caliper splint which gives a natural firm support. You can make a perfectly good Hodgen splint out of these ordinary splints such as we use in orthopedic surgery by modifying a Thomas caliper after the Hodgen splint model which gives you a stability which you cannot secure in any other way plus most of the advantages of the Hodgen.

DR. O. H. McCANDLESS, Kansas City: Twenty-five or fifty pounds weight does not overcome a bone overlapping. The term extension has been overworked. The popular conception is that this extension accomplishes something in correcting actual bone deformities. But an extension of 25 to 50 pounds is absolutely negligible when it comes to producing immediate measurable increase in length of bone. It does accomplish fatigue of the muscle, and eventually we get extension in that way, by overcoming the muscle contraction. These cases are put up for a long period of time. Five days is the average time required to overcome muscle cramp.

The roentgen rays are conspicuous by their absence here, in showing the amount of extension resulting. I have known surgeons to put as much as 200 pounds extension on the leg with an almost negligible increase in the actual length of the bone.

DR. C. F. SHERWIN, St. Louis: In answer to Dr. McCandless I would say that 200 pounds does not bring the bone into its proper length at once. The Hodgen splint is not made for that purpose. It applies constant extension of a small amount. Bone shortening is caused only by muscle pulling, and a constant pull for four or five days or two weeks will pull any bone into position, and this is the only splint I know of in which you can make the injured limb longer than the sound limb if you want to do that. I am sorry that I did not have time to show the roentgen-ray pictures. I also had some slides made to show the necessity for abduction. It is very important to mention also the fact that extension does not pull the bone into place at once, but it does pull the bone to its proper length and keep it there if the proper amount of extension is applied.

DR. F. G. NIFONG, Columbia: Now as regards a transport splint and a first aid service I wish to especially commend a modified Hodgen splint. When you have a badly lacerated and injured limb with compounded fracturing you need a splint which may be applied with the minimum of handling to prevent added shock. Such a splint as the Thomas, through the ring of which you have to introduce the limb, may

cause additional damage and shock. This Hodgen splint may be applied with no more handling than will be necessary to make the necessary extension, and when in the ambulance may be suspended from the roof and add very much thereby to comfort in transport.

Now as to the amount of extension that may be used, in answer to the doctor from Kansas City. No one should think of putting 200 pounds extension on a limb. Neither should 50 pounds be put on. It is true that strong spastic muscles can hold even 200 pounds and the deformity continue for some time. Twenty-five pounds or even less, however, is quite sufficient. In a few days at most the muscles become totally relaxed, especially when the limb is put in physiological flexion and the bones come back into apposition. Too great an amount of weight has a tendency to keep up the spasticity of the muscles and acts not so well as a moderate amount. A properly applied Hodgen splint with a pull of 15 to 25 pounds is quite sufficient. It is the steady continuous pull that soon puts the muscle at rest and the bone in apposition. Very shortly if not at first a weight of eight or ten pounds is ample which may be reduced as time goes on until finally suspension alone will be needed.

PERSONAL RESPONSIBILITY OF PHYSICIANS TO NATION *

F. W. BURKE, M.D.

LACLEDE, MO.

A specific subject was assigned by the board of censors but a digression has been made and I shall not discuss fractures of the femur, but rather take up a subject which at the present moment seems more timely and if possible very much more complex.

The necessity of this paper was most forcibly brought to mind by certain correspondence which was presented to the Medical Defense Committee of Linn County, of which body I am a member.

The subject to which I wish to call your attention is personal responsibility. Not responsibility to self or family, or patient or friend, or community or state, but our personal responsibility to our nation and to its thousands of unborn generations.

I do not refer to the responsibility which I may possibly owe in the future, or to the responsibility which I think you may owe now, or the responsibility that some other doctors far remote may owe, but I do refer to the responsibility that every doctor in Linn County owes just now to the world and to humanity. This is a responsibility of such huge proportions that it is more than possible we cannot grasp it. It means more than loss of business or home association or comfort. It means more than the loss of those things for which we have worked years to establish—our reputations. It means danger with possible death or loss of

* Read at the Meeting of the Linn County Medical Society, Aug. 17, 1918.

limb or eyes or hearing or impaired health. It means the probable loss of any business to return to after the war is over. It means exposure and privation, suffering and discomfort. It means worries and submissions, to which we are unaccustomed, and a myriad of untold things of which we know nothing; but even so are we in a position to shift this responsibility?

I take this logical supposition to be true. The war must be won by us and our allies. If so, whose duty is it to bear the burden? Let us not evade, but let us be men and with analytical minds and clear judgment decide whose business it is to step into the breach and offer aid while the country is meeting the greatest crisis in her history; a crisis so great that it means simply this—a place in the sun or annihilation. There is no half way place between the two extremes. Patched up compromises will not solve the problems which confront us. We may be able by some means to fool the people, but if we are honest we cannot excuse ourselves, and the time has arrived when Linn County physicians as a whole should go on record offering themselves to their country to be placed in positions not of their own choosing, but rather to offer their service unreservedly for duty and to take without murmur what may seem most expedient to those in authority. The time has passed when we should fence for positions. No man has a graver responsibility or more at stake than you and I. No man is worse needed or can be more easily spared for service than you and I. No man has a better right to fight for the institutions which make us free or for the opportunity of their continuation than just you and I. No man will gain more by the proper conclusion of the war or receive greater reward than you and I.

Now truly, I wonder by what means we have reached the conclusion that it is right and proper for the other fellow to fight our battles? Argue against it as you may, we have reached just that conclusion and no other; but by what right? Have we decided that we are needed in our various communities? Who said so? So great a man as Lincoln passed out when it seemed that the world needed him the most, yet the nitch was closed and the sweeping tide of progress moved steadily on and on, as it will continue to do regardless of us, and the only question of importance is, will we be a factor or a nonentity?

Have you decided that as you are just beginning your professional career you cannot afford to make the sacrifice? What right have you to a career when our nation's honor is at stake and when the foundation of all self governments are trembling, and what opportunity do you suppose you would have for a career if some one does not save our institutions for us?

Oh, young man, opportunity stands knocking at your gate and I would implore you to heed its call, for it presents the greatest possible chance for a future career. Have you decided that because you are middle-aged and that because you are just now well established in business, that you have no call to do your bit in a cause which will either maintain for you that which you have or if lost will take away from you what is more cherished than life itself? From my standpoint there is just as much necessity for the middle-aged as for the young man to present himself as a barrier to despotism and to misery.

Have you a wife and children to leave at home, who need your care and protection? If so, more's the reason why you should be ready to accept your burden and help protect your own. Who would you have make it possible for your children and your children's children to be free? Some one who has none of his own or who has no interest in yours? If this war means anything at all it is this: that the world may be free, not for today, or tomorrow or a year, but for a thousand centuries yet to come, so that your progeny and mine will have an even chance with any, if they are willing to accept the opportunity. There can be no more urgent call to any than to the man between 40 and 55. He is doing the best work of his lifetime, and is most needed by his country.

Upon the active man above 55 will probably fall real hardships. From mere necessity, in most cases, he will be left at home and no more will he have the opportunity to choose his work as he has in the past, but again must he put his shoulder to the wheel and push for life in order that he may do his part in the great evolution of events. Will he do his work and do it well? I know and so do you that he will be no slacker and that he will offer no excuses, but will quietly and without braggadocio enter the lists, ready to do or die, the bravest patriot of us all. He expects no medals for bravery, yet if need be at the expense of his very life's blood, through the sunset of his life he will drudge and slave in order that the world may reap the reward.

I am a hero-worshiper and have been since childhood and my ideal yet lives in the old school physician. His like cannot be found except among the older of our profession, and I would admonish you to emulate his virtues and forget his frailties of which he had but few.

No man has a right to shirk responsibility, either young or old, and it is my notion that the Linn County Medical Society in toto should offer its service to the government, not next week or not when we have individually concluded that our service is needed, but now and, without quibbling, accept what comes.

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OF THE
Missouri State Medical Association

Address all Communications to 3517 Pine Street, St. Louis, Mo.

DECEMBER, 1918

EDITORIALS

THE FIFTIETH GENERAL ASSEMBLY

The coming session of the General Assembly will undoubtedly witness the renewed efforts of the optometrists, chiropractors, and chiropodists to induce the legislature to pass bills making all these persons "doctors."

The disgraceful conduct of the advocates of optometry and chiropractics during the last session of the legislature will be fresh in the minds of the members of the coming assembly and ought to be sufficient to condemn attempts to pass their bills at this session; and most assuredly the chiropodists do not need a law authorizing them to practice the art of trimming corns. The real purpose of all such legislation is to throw about the beneficiaries of it the dignity of governmental recognition and legality of their acts, but there are always provisions in every such law which permit the licentiates to assume qualifications they do not possess and preempt the title "doctor" which mislead and deceive the people. Our present medical practice law is all-sufficient for safeguarding the health of the people, because it provides for the prosecution and punishment of persons who attempt to practice medicine without a license. Any law that permits persons to tamper with the human body or any part of it without a thorough medical education is a menace to the health of the people.

TO PROTECT MISSOURI'S CHILDREN

Complete revision of the compulsory school attendance and child labor laws, measures for the care and support of children born out of wedlock, bills for the care and treatment of defective children, are among the measures proposed in the revisions of the Missouri statutes relating to children, in the report of the Missouri Children's Code Commission, just issued.

The commission was appointed by Governor Gardner to continue the work of the one appointed in 1915 to revise and codify children's laws in the state. Only part of the children's code prepared by the 1915 commission was enacted at the 1917 session of the legislature.

Among these are the state-wide mother's pension act, juvenile court act for the smaller counties of the state, new adoption law, law providing treatment for incorrigible minors over the juvenile court age. The remainder of the laws in the code forms the basis of the commission's new report.

The report states that in 1917 Missouri had a juvenile population of 1,481,085 children under twenty-one years of age, ranking seventh among the states in the number of children. "The problem of caring for children in Missouri is distinctly a rural one; 65 per cent. of the children of the state live in the rural districts. In spite of this fact, little consideration has been given to child welfare work in the counties. It is the aim of the commission to offer the same opportunity to the children in the state as is offered children in the larger cities. In considering the problems of children today the Children's Code Commission has viewed them in the light of the future. The citizens of tomorrow must be fully equipped to assist in the development of worldwide democracy. In order to do this the state must place education and training for life work within the reach of every future citizen. In addition, the state must take all necessary steps to provide treatment for children with mental or physical defects; to care of destitute and neglected children; to prevent poverty, disease and crime."

The commission proposes the following amendments to the child labor law: prohibiting employment of children under fourteen in all occupations in the state except that such children may work in agriculture when school is not in session; raising the age limits for boys in street trades to twelve and for girls to eighteen and requiring licenses and badges; prohibiting employment of children under twenty-one years in night messenger service; requiring physical examination and completion of eighth grade in school for the issuance of employment certificates for children between fourteen and sixteen; raising compulsory school attendance age to sixteen years; requiring attendance for the full school term throughout the state; extending the compulsory school attendance law to deaf, blind and crippled children where special classes for their training have been provided; requiring working children between fourteen and sixteen to attend continuation classes not less than eight hours a week between the hours of 8 a. m. and 5 p. m.

Federal investigations in 1916 mentioned in the report show that next to farm labor street trades hold the largest number of children working before and after school hours and during the school session. "It is clear that children who spend more than four or five hours a day outside of school hours selling on

the streets are under too great a strain to make the best use of their time at school. Of all forms of street trades engaged in by children none is as harmful as the messenger service. It brings the child into personal contact with vice, it fails to train him for future work, teaching little of value and leaves him unfit for industrial life. Thirty states in the Union have regulated night messenger service for children. Missouri has made no provision whatever to keep children out of this objectionable occupation."

The commission recommends a series of bills dealing with the problem of illegitimacy, providing for the establishing of paternity for children born out of wedlock through court proceedings, permitting the court to determine the proportion of support to be paid by father and mother, and giving the child born out of wedlock the same right of inheritance from its natural father as it has from its mother at the present time. "The whole problem of illegitimacy has been emphasized during and because of the war. No nation can longer overlook the drain on the population by excessively high infant mortality among the illegitimate infants, higher now than ever before because the increased cost of living makes it more difficult for the mother alone to support the child. Reforms in the handling of this problem are being considered in many of the warring countries and in our own states. In making the father share in the support of these children it is believed the illegitimate birth rate will considerably decrease. In practically all of the warring countries the illegitimate child has been included in government provision for the support of soldiers' families."

The commission proposes several revisions of the marriage laws, prohibiting the issuance of marriage licenses to persons who are feeble-minded, epileptic and mentally imbecile. The commission further recommends the abolition of common law marriage and the publication of notices on intention to marry.

A system of supervision and licensing of maternity hospitals and private institutions caring for children is proposed.

The establishing of special classes for feeble-minded, deaf, blind and crippled children, a law permitting the courts to commit dependent feeble-minded persons to the state institutions, the creation of a bureau for mental defects in the University of Missouri to serve the courts, school and institutions in the examination of defective children, are among the measures recommended for the care of defective children.

The commission recommends the creation of a division of hygiene in the state board of health to study the causes of infant mortality,

to regulate the practice of midwifery, and supervise sanitary conditions of rural school buildings. "The importance of saving the lives of babies has been greatly emphasized since the war," the report states. "Determined efforts to protect the health of children are being made everywhere in order that the next generation may be strong in body and able to meet the task that will confront them. With the limited powers at present given the state board of health, activities for the health of infants and children are neglected."

The report contains Governor Gardner's letter of transmittal to members of the Fiftieth General Assembly in which he says: "The Forty-Ninth General Assembly did well in enacting several of the laws recommended by the commission, but it did not go far enough. The program proposed by the commission this year is comprehensive and constructive. The measures are closely correlated and I ask you to give careful consideration to the proposed laws as a whole."

WORKMEN'S COMPENSATION

The new bill to provide for compensation of workmen sustaining accidental injury in line of duty will be introduced in the legislature next January. The bill is almost identical with those presented in previous sessions but it has been modified by giving the injured employee, the right to choose his own physician and hospital if he desires to do so, a condition that the medical profession fought for in the past but was not included.

The bill is probably the most satisfactory measure of its kind that has yet been proposed in any state, its benefits to the injured workman being somewhat more liberal than the New York bill and the inclusion of the right of the employee to call his own physician. In its present form, therefore, the bill has the approval of our member of the committee that framed the measure, Dr. R. M. Funkhouser of St. Louis, and it should receive the support of the medical profession. While the bill limits the amount to be paid for all medical and hospital treatment to \$200 for the first eight weeks of disability, the commission administering the law is authorized to extend both these limits "to such time and amount as may reasonably be necessary." The commission is also authorized to make a change in the physician, surgeon, hospital, or other requirement in the care of the injured workman if there is reasonable ground for believing that these requirements are being furnished in such manner as to endanger the life, health, or recovery of the employee.



NEW FACES FOR OLD

"New faces for old" might be the motto of one branch of the American Red Cross in France, for that is the work that is actually going on.

Men who have been wounded and who have come back from the edge of death with such frightfully disfigured faces that they cannot bear the thought of meeting the gaze of people, are being supplied with what are known as portrait masks.

The process was originated in England by Capt. Derwent Wood, but the Red Cross was the first to take it to France. An American sculptor, Mrs. Anna Coleman Ladd, makes the masks which are cast in very thin copper, covered with a silver deposit and painted to resemble flesh. They are attached to the face by spectacle bows.

These masks are of different shapes and sizes according to the mutilation, covering a torn jaw, a nose shot away or an eye gone and leaving a great gaping wound.

By this means, the worst of the *mutilés*, as the French term them, are enabled to go about the streets without attracting attention, and they can carry on frequently the business in which they were engaged before the war, or some other equally active and useful employment.

Yet another work, through the Bureau for the Relief of Mutilés, is to supply artificial arms and legs. During the four months of last winter, 454 of such limbs were fitted to soldiers who had come back from the battlefields of France crippled and maimed.

This too, as in the case of the portrait masks, is a part of the plan for preparing disabled men to go back to some occupation without the handicap of mutilation. Many of them have to be trained to some new trade or to a new use of hands.

When a soldier comes through an amputation operation he is in a state of pretty complete discouragement regarding his future. But when he finds that some one is taking an interest in his life, that he will be provided with training, with a "regular job," and also with arms, legs or a part of a face if necessary, to enable him to carry it on, he is cheered beyond words.

It is surprising how nearly human some of the mechanical limbs are. A natural arm is operated by muscles which pull tendons as they contract and release. These muscles need not

be in the arms, however; they may be those of the shoulders, back and chest, and to these the new limbs are attached. In the complicated artificial arms, steel wires or rawhide cords act as tendons, linking up the fingers, wrist and elbow with a new muscular combination. Springs provide the power that makes the joints and tendons work.

There are two kinds of limbs provided, those that are made in as close an imitation as possible, as far as looks go, of the real arms or legs, and others that are merely working members.

The first of these is generally worn for appearance, with the man's "Sunday clothes," while the latter, often an unsightly framework of steel, is what the workman uses in pursuit of his trade. It consists of a mechanical socket especially designed to hold tools such as are used in ordinary trades and is adjusted to the amputated stump by means of a leather cuff and straps. A universal joint allows the tool to swing in any position and to any angle.

Men may be seen mowing hay, working in machine shops, carpentering, carrying mail, operating typewriters, shoveling by means of a broad belt with a socket for the handle, all with artificial limbs, and among the blind, who have lost arms, a tool is used which enables them, even though their eyes be sightless, to cut bristles for brushmaking.

To add its help and encouragement to these men is a part of the work of the Red Cross, and every one can help carry on this wonderful work.

The Christmas Roll Call of the American Red Cross will soon be here. There are thirty million members already, of whom eight million are schoolchildren.

The Roll Call has for its keynote the words: "Universal Membership."

Every one can help to send a Christmas greeting to those mutilated men across the sea by bringing in new members of one of the great organizations which are giving so much—the American Red Cross.

PREVENTION OF INFANT MORTALITY

The annual meeting of the American Association for Study and Prevention of Infant Mortality which was transferred from Asheville, N. C., to Chicago, December 5-7, calls to our attention the excellent work of this organization.

In the program for war reconstruction in the United States the country should not lose sight of the welfare of its children. During 1918 an effort has been made from Washington through the auspices of the Children's Bureau to survey the general aspects of child welfare

in this country, the movement being known as "Children's Year." It is to be hoped that, with our present organizations and the advice of the Red Cross workers who have returned from their work with the children of France, something definite may be begun looking toward the physical betterment of the nation's children.

Members of the medical profession, who can always be counted on to take an interest in forward movements for the conservation of health, are urged to join this organization and become acquainted with its work so that every community will have the benefit of carefully worked out plans for child welfare. In addition to physicians there are many other individuals who are doing philanthropic work of this nature and they can be of great assistance.

Missouri has as her committee, Dr. Frank C. Neff, chairman, Kansas City; Dr. Gustav Lippmann, St. Louis, and Dr. Hasbrouck De Lamater, St. Joseph. This committee is conducting a campaign for membership in the organization.

OUR SERVICE FLAG

On the front cover we have reproduced the service flag that flies from the office of the association. It contains 1,499 stars and four gold stars, the latter representing the supreme sacrifice paid by the following Missouri physicians, all of whom were members of our association: Lieut. William T. Fitzsimmons of Kansas City, killed Sept. 4, 1917, when a German aeroplane dropped bombs on the Base Hospital of the Harvard Unit at Rouen, France, in which he was serving; Lieut. Floyd S. Bates, M. C. Adrian, Mo., killed by lightning at Fort Riley, Aug. 6, 1917; Lieut. Frank V. Frazier, M. C., Altmont, Mo., died in a military hospital in France from bomb wounds, March 24, 1918; Lieut. Charles R. Long, M. C., Sedalia, Mo., killed by a shell explosion while returning from duty in the front line in France, April 26, 1918.

Four physicians from Missouri were reported captured by the Germans and held prisoners of war before the cessation of hostilities. There may have been others, but if so, the information did not reach us. Those who have been reported prisoners of war are: Lieut. Louis M. Edens, Cabool; Lieut. Harold A. Goodrich, Webster Groves; Capt. John F. Hardesty, Winfield (formerly at St. Louis); Capt. Arthur H. Sewing, St. Louis. All are members of the association except Dr. Goodrich.

The total number represents all physicians commissioned from Missouri, whether members of our association or not up to November 11, on which date the War Department stopped giving commissions. The number of physicians commissioned represents 24.7 per cent. of the total number of practitioners in the state.

NEWS NOTES

DR. J. L. EATON, superintendent of Hospital No. 4, Farmington, announces that he has established a training school for nurses at the institution.

THE state auditor's report of the examination of the fiscal management of State Hospital No. 4 at Farmington, of which Dr. J. L. Eaton is superintendent, shows the accounts are in excellent condition for the year 1916-1917.

DR. T. J. DOWNING, New London, secretary of Ralls County Medical Society, was recently called to Nitro, W. Va., on account of the illness of his daughter who was suffering from pneumonia. She is reported recovering from the attack.

THE W. G. Cleveland Drug and Surgical Company of St. Louis is a new advertiser in our pages. While this company has only recently entered the field in St. Louis, it has been in business in Omaha, Neb., for a number of years, where it enjoys the confidence and esteem of the medical profession in that section.

FAIRCHILD BROTHERS & FOSTER of Philadelphia is a name that is familiar to all physicians, and their products represent the highest type of medicinal preparations. Their advertisement appears in our JOURNAL for the first time, but we hope they will find our members so responsive that they will continue announcing their products through our JOURNAL. The present advertisement is for this issue only and we invite the attention of our readers to it.

IN recognition of his distinguished services in behalf of military sanitation, Major-General William C. Gorgas, until recently Surgeon-General, United States Army, has been made a grand officer of the Order of the Crown of Italy. The ceremony of presentation took place on November 5, in the office of the Surgeon-General, the order being presented by Major-General Emilo Guglielmotti, military attache of the Royal Italian Embassy.—*Science*.

EVERY doctor should be interested in encouraging American manufacture of typically American medical products. Let us, by enthusiastic patronage of all-American manufacturers, so firmly establish the American supremacy in this field that there will never be the slightest danger of its passing back to Germany. One typically American invention is the new wax-impregnated open-mesh lace dressing for wounds, burns, bruises, etc., which bids fair to revolutionize the present-day dressing methods. It is said that careful tests in large industrial

hospitals show that the use of this lace mesh will effect a saving of from 50 to 75 per cent. of gauze, absorbent cotton, and roller bandages, as well as hours of the time of surgeons and nurses. It will also prevent much suffering to the patient caused now by the removal of adherent and stiff dressings, for this new lace dressing does not stick.

THE influenza epidemic will be made the most important subject of discussion at the December meeting of the American Public Health Association. Some of the questions which will be discussed are the following:

Is influenza vaccine efficacious as a prophylactic? What type of vaccine is most useful? Does it help as a therapeutic? What about nose and throat sprays? What are the results with convalescent serum? What about the open-air treatment? How can the health officer coordinate hospital, medical, health, and relief agencies in similar calamities? How can we take advantage of the epidemic for the benefit of more adequate health appropriations and better community and personal hygiene?

Headquarters of the meetings will be at Hotel Morrison, Chicago; the dates, Dec. 9-12, 1918. The secretary of the association may be addressed at 126 Massachusetts Avenue, Boston, Mass.

MEMBERSHIP CHANGES, NOVEMBER

CHANGES OF ADDRESS

Anderson, A. L., Landers Bldg., Springfield, to 1004 Cherry St.

Bacon, Martha M., 310 Argyle Bldg., Kansas City, to 23333 Swope Parkway.

Baker, R. W., 4519 McMillan Ave., St. Louis, to 2412 W. 9th St., Los Angeles, Calif.

Colby, Buford M., State Hospital No. 2, St. Joseph, to General Hospital, 25th and Cherry Sts., Kansas City.

Detweiler, A. J., Hannibal, Mo., to 109 West Broadway, Columbia.

Dewey, C. O., Breckenridge, Mo., to Lark, Utah.

Elkins, Harold E., Hardin, Mo., to 503 Cherry St., Mt. Carmel, Ill.

Evans, E. J. E., 300 Westport Ave., Kansas City, to 3917 Broadway.

Francis, H. H., 3038 Lafayette, St. Joseph, to Centertown, Mo.

Henry, Rolla H., 3673 Folsom Ave., St. Louis, to Superintendent City Hospital.

Holley, A. E., Rock Island Bldg., St. Joseph, to 822 Edmonds St.

Keith, W. E., Excelsior Springs, to 807 Waldheim Bldg., Kansas City.

Ladd, F. A., Bank of Commerce Bldg., St. Joseph, to 3106 Jule St.

Love, Joseph W., Woodruff Bldg., Springfield, to Landers Bldg.

Martin, J. Ross, Merwin, Mo., to Huntsville, Texas.

Marty, L. A., 100 Rialto Bldg., Kansas City, to 820 Rialto Bldg.

Moskop, Peter G., 2730 South 13th St., St. Louis, to 3537 Connecticut St.

Pearse, H. E., 4515 Wornell Rd., Kansas City, to 5432 Wyandotte St.

Pell, Teresa, 5000 Vernon Ave., St. Louis, to 619 University Club Bldg.

Remley, George C., 2628 Canal St., New Orleans, La., to 6393 West End Blvd.

Scott, J. N., 1130 Rialto Bldg., Kansas City, to Peabody, Kan.

Werner, Charles H., 15th and Penn Ave., St. Joseph, to 710½ Felix.

NEW MEMBERS

Andrews, Raleigh K., St. Louis.

Brown, Wilbur K., St. Louis.

Burgher, Arthur E., St. Joseph.

Cooper, George F., Kansas City.

Gillespie, Robert A., Napoleon.

Lawson, Sidney, St. Joseph.

Mendell, Edwin A., St. Joseph.

Nixon, John W., Kansas City.

Parker, James H., Fulton.

Pauley, William H., St. Louis.

Pentz, William E., St. Joseph.

Ravold, Henry J., St. Joseph.

Rose, Rose Minnie, St. Louis.

Settle, Francis B., St. Louis.

Stone, Edna M., St. Louis.

Thomson, David A., St. Louis.

Whitsell, John C., St. Louis.

Young, Anthony O., St. Louis.

TRANSFERRED

Baldwin, F. A., St. Louis, to Boone Co. (Mo.) Medical Society.

RESIGNED

Claus, Otto F., St. Louis.

James, J. A. J., St. Louis.

DIED

Colby, Ella T., Roads, R. D. Norborne.

Harmon, G. W., Tyrone.

Ott, Charles W., Higginsville.

Trautmann, T. J., Hayti.

CORRESPONDENCE

CANCELLATION OF APPEAL FOR THE COLLECTION OF SCRAP PLATINUM

To the Editor:—The Platinum Section and the Section of Medical Industry, War Industries Board, desire to express appreciation of the hearty response made by physicians, dentists and others when the call for scrap platinum was made.

As the governmental demand for platinum in the making of explosives, etc., has been tremendously decreased by the curtailed war program, it is requested that no further scrap platinum be tendered to the government through the channels indicated in our communication of Sept. 17, 1918.

CHARLES H. CONNER,
Chief of Platinum Section.
F. F. SIMPSON,

Lieut.-Col., M. C., U. S. A.,
Chief of Section of Medical Industry.

MISCELLANY

RESERVE OF THE PUBLIC HEALTH SERVICE

Senate Joint Resolution 63 (65th Cong., 2d Sess.), to Establish a Reserve of the Public Health Service

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of securing a reserve for duty in the Public Health Service in time of national emergency there shall be organized, under the direction of the Secretary of the Treasury, under such rules and regulations as the President shall prescribe, a reserve of the Public Health Service. The President alone shall be authorized to appoint and commission as officers in the said reserve such citizens as, upon examination prescribed by the President, shall be found physically, mentally, and morally qualified to hold such commissions, and said commissions shall be in force for a period of five years, unless sooner terminated in the discretion of the President, but commission in said reserve shall not exempt the holder from military or naval service.

Provided, That the officers commissioned under this act, none of whom shall have rank above that of Assistant Surgeon-General, shall be distributed in the several grades in the same proportion as now obtains among the commissioned medical officers of the United States Public Health Service, and shall at all times be subject to call to active duty by the Surgeon-General, and when on such active duty shall receive the same pay and allowances as are now provided by law and regulation for the commissioned medical officers in the said regular commissioned Medical Corps. (Approved Oct. 27, 1918.)

For some time it has been felt that the United States Public Health Service should have at its disposal a permanent reserve, on which it could draw in time of emergency such as that presented by the present epidemic of influenza. Moreover, it seemed

desirable to provide for the commissioning, as reserve officers in the Public Health Service, of men whose work through experience gained in other fields would be of great service to the federal health authorities.

With the numerous demands made on the Public Health Service during the present epidemic, attention was again called to a joint resolution (S. J. Res. 63) pending in Congress since June, 1917. In the form reproduced herewith this resolution was agreed to by the House of Representatives on October 18 and by the Senate on October 21. It was formally approved by the President on Oct. 27, 1918.

By far the larger part of the reserve to be organized under this act will be on active duty only during times of national emergency, though it will probably be necessary to establish periodic terms of training, so as to better fit the officers for such service. With the passing of the emergency these men will automatically go on the inactive list; always, however, subject to call to active duty by the Surgeon-General. Detailed plans for the organization, training, and assignment of the reserve officers are now under consideration.—*Pub. Health Reports.*

ORDERS TO MISSOURI PHYSICIANS IN THE MEDICAL CORPS OF THE ARMY FROM OCTOBER 26 TO NOVEMBER 16, INCLUSIVE

Bell, Capt. C. T., Maryville, to Camp Crane, Pa., from Fort Bliss.

Billeter, Lieut. W. J. Bynumville, to Lexington, Va., Washington and Lee University, from Nashville, Tenn.

Burns, Capt. S. S., St. Louis, to Fort Oglethorpe, evacuation hospital, from Camp MacArthur.

Caldwell, Lieut. J. C., Laclede, to Camp Crane, Pa., Evacuation Ambulance Company, from Fort Riley.

Calvert, Lieut. H. A., Smithville, to Pittsburgh, from Camp Lewis.

Cantrell, Capt. C. D., Kansas City, to Fort McPherson, Ga., for instruction.

Capell, Capt. C. S., Kansas City, to Camp Greene, N. C., base hospital, from Fort Oglethorpe.

Chapman, Lieut. T. E., Joplin, honorably discharged on account of physical disability existing prior to entrance into the service.

Chase, Lieut. F. E., St. Louis, to Colonia, N. J., for instruction, from Fort Oglethorpe.

Clabaugh, Capt. O. W., Sedalia, to Williamsbridge, N. Y., from Fort Oglethorpe.

Cooper, Capt. C. L., Kansas City, to Camp Crane, Pa., from Camp Custer.

Donahue, Lieut. J. C., St. Louis, to Camp Zachary Taylor, Ky., base hospital, from Jefferson Barracks.

Eber, Lieut. C. T., St. Louis, to Camp A. A. Humphreys, Va., from Camp Grant.

Ferguson, Capt. W. J., Sedalia, to Camp Crane, Pa., from Camp Hancock.

Flader, Lieut. O. F., St. Louis, to Camp Crane, Pa., mobile hospital, from Fort Oglethorpe.

Forgrave, Lieut. L. P., St. Joseph, to Camp Crane, Pa., from Camp Logan.

Gettys, Capt. H. B., St. Louis, to Camp Wheeler, Ga., from Fort Oglethorpe.

Goldman, Lieut. M., Kansas City, to Fort Oglethorpe, for instruction, from Boston.

Green, Capt. J. R., Independence, to Camp Crane, Pa., from Camp Sheridan.

Gregg, Lieut. A. M., Joplin, to Camp Crane, Pa., from Fort San Houston.

Griot, Capt. G. A., St. Louis, to Camp Meede, Md., evacuation hospital, from Camp Logan.

Happel, Capt. H. E., St. Louis, to Camp Crane, Pa., from Camp Sevier.

Harris, Capt. R. C., St. Louis, to Camp Sevier, S. C., base hospital, from Fort Oglethorpe.

Hecker, Capt. C. H., St. Louis, to Camp Crane, Pa., from Walter Reed General Hospital.

Hertel, Lieut. A. L., St. Louis, to Fort Oglethorpe, evacuation hospital, from Camp Shelby.

Hudson, Lieut. F. A., Buffalo, honorably discharged on account of physical disability existing prior to entrance into the service.

Janes, Capt. V. B., Cameron, resignation accepted.

Johnson, Lieut. Roy Walford, St. Louis, to Camp McClellan, Ala., base hospital, for instruction.

Jones, Capt. W. G., Lincoln, to Hoboken, N. J., from Camp Upton.

Krueger, Capt. O. W., Kansas City, to Camp Crane, Pa., base hospital, from Camp Dodge.

Lawrence, Major W. S., St. Louis, to Camp Kendrick, N. J., from Camp Beauregard.

Leonard, Capt. P. I., St. Joseph, to Fort Oglethorpe, for instruction.

Lichtenberg, Capt. J. S., Kansas City, to Camp Sevier, S. C., base hospital.

Loeb, Major H. W., St. Louis, to Jefferson Barracks, Mo., from St. Louis.

McCall, Capt. G. D., Fulton, to Rockefeller Institute, for instruction in the treatment of infected wounds, and on completion to Colonia, N. J., for instruction, from Camp Dix.

McCubbin, Lieut. J. B., Fulton, to Camp Crane, Pa., evacuation hospital, from Camp Lee.

Mabee, Capt. J. R., Huntsville, to Camp Abraham Eustis, Va., from Fort Riley.

Moreland, Capt. G. H., Kansas City, to Fort Oglethorpe, for instruction, from Syracuse.

Morfit, Major J. C., St. Louis, to Hoboken, N. J., base hospital, from Fort Sheridan.

Myers, Capt. J. L., Kansas City, to Camp Wheeler, Ga., base hospital, from Fort Oglethorpe.

O'Connell, Lieut. J., St. Louis, to Camp Wheeler, Ga., base hospital, from Fort Oglethorpe.

Ogilvie, Capt. F. L., Bloggett, to Camp Zachary Taylor, Ky., field hospital, from Fort Riley.

Orr, Capt. T. G., Kansas City, to Fort Des Moines, Iowa, from Fort Oglethorpe.

Perry, Lieut. D. C., Mound City, to Camp Crane, Pa., Evacuation Ambulance Company, from Fort Riley.

Reynolds, Capt. S. D., Gower, to Fort Riley, to examine the command for nervous and mental diseases, from Central Department.

Riley, Lieut. F. P., Clyde, to Camp Crane, Pa., Evacuation Ambulance Company, from Fort Riley.

Robeson, Lieut. David Loran, Kansas City, to Fort Riley for instruction.

Seibert, Lieut. D. A., Washington, to Camp Crane, Pa., Evacuation Ambulance Company, Fort Riley.

Shaw, Major F. W., Mount Vernon, to Camp Meade, Md., from Camp Dodge.

Singleton, Capt. D. E., Clarence, to Fort Benjamin Harrison, base hospital, from Camp Dodge.

Stratton, Lieut. C. S., Roscoe, to Rockefeller Institute for instruction in the treatment of infected wounds, and on completion to Camp Devens Mass., base hospital, for instruction, from Fort Oglethorpe.

Tate, Capt. P. S., Farmington, to Rochester, Minn., Mayo Clinic, for instruction and on completion to Camp Dodge, Iowa, base hospital, for instruction, from Fort Riley.

Toomey, Lieut. T. N., St. Louis, to Camp Dodge, Iowa, to examine the command for nervous and mental diseases, from Ann Arbor.

Treasure, Lieut. B. A., McFall, to Fort Leavenworth, Kan.

Van Ravenswaay, Capt. C. H., Boonville, to Rockefeller Institute for instruction in the treatment of infected wounds, and on completion to Camp Dix, N. J., base hospital, for instruction, from Fort Oglethorpe.

Wheeler, Capt. W. M., Sedalia, to Camp Zachary Taylor, Ky., base hospital, from Fort Oglethorpe.

Young, Lieut. J. C., Ozark, to Chicago, from Fort Riley.

COMMISSIONS OFFERED AND ORDERS TO DUTY ON ACCEPTANCE, OCTOBER 26, TO NOVEMBER 16, INCLUSIVE

Aber, Lieut. W. H., Aullville, to report to the commanding officer, Central Department.

Anderson, Capt. A. L., Springfield, to Camp Sevier, S. C., base hospital.

Aufderheide, Capt. W. D., St. Louis, to Fort Oglethorpe for instruction.

Austin, Capt. M. B., Brunswick, to report to the commanding officer, Central Department.

Back, Lieut. G. C., Zalma, to Fort Riley for instruction.

Bassett, Capt. S. T., St. Louis, to Fort Riley for instruction.

Beard, Lieut. F. G., Maitland, to Camp Bowie, Texas, base hospital for instruction.

Beebe, Lieut. J. A., Kansas City, to Fort Riley for instruction.

Best, Lieut. J. A., High Hill, to Fort Riley for instruction.

Blount, Lieut. H. J., Potosi, to Camp Pike, Ark.

Boehm, Lieut. E., St. Louis, to Camp Beauregard, La., base hospital for instruction.

Brennan, Lieut. J. W. L., St. Louis, to Fort Oglethorpe for instruction.

Brooke, Lieut. J. F., Kansas City, to New Haven, Conn., Yale Army Laboratory School, for instruction.

Buck, Lieut. S. B. Anderson, to Fort Riley for instruction.

Buren, Capt. C. R., Princeton, to Fort Riley for instruction.

Byrd, Lieut. R. L., St. Louis, to Fort Riley for instruction.

Cambre, Lieut. A. L., Atlanta, to Fort Riley for instruction.

Chipp, Lieut. J. K., New Hampton, to Fort Riley.

Clark, Capt. H. R., Pierce City, to Fort Riley for instruction.

Clark, Capt. W. J., Maysville, to Fort Riley for instruction.

Courshon, Lieut. A. J., Williamsburg, to Fort Riley for instruction.

Cullers, Lieut. C. H., Spickard, to Fort Riley for instruction.

Czarlinsky, Lieut. H., Kansas City, to Fort Riley for instruction.

Dandurant, Capt. L. J., St. Joseph, to Fort Riley for instruction.

Davie, Lieut. J., St. Louis, to Fort Riley for instruction.

- DePew, Lieut. H. B., St. Louis, to Fort Riley for instruction.
- Detweiler, Capt. A. J., Hannibal, to Fort Riley for instruction.
- Dodson, Lieut. C. L., Moberly, to Fort Riley for instruction.
- Doll, Lieut. J. E., St. Louis, to Fort Riley for instruction.
- Dorsett, Capt. E. L., St. Louis, to Camp Shelby, Miss., base hospital, for instruction.
- Drake, Capt. G. S., Jr., St. Louis, to Camp Logan, Texas, base hospital, for instruction.
- Dudley, Capt. C. E., St. Louis, to Fort Riley for instruction.
- Eck, Lieut. P. A., St. Louis, to Fort Riley for instruction.
- Evans, Lieut. E. E., New Florence, to Fort Riley for instruction.
- Farr, Lieut. F. F., Kansas City, to Fort Riley for instruction.
- Farrell, Capt. J. J., Hannibal, to Fort Riley for instruction.
- Ferguson, Lieut. A. D., Hunnewell, to Fort Riley for instruction.
- Fore, Capt. T. P., Brookfield, to Fort Riley for instruction.
- Francis, Lieut. H. H., St. Joseph, to Fort Riley for instruction.
- Freeman, Lieut. T., Piedmont, to Fort Riley for instruction.
- Fulbright, Capt. J. H., Springfield, to Fort Oglethorpe for instruction.
- Gammage, Lieut. T. R., Kansas City, to Fort Oglethorpe for instruction.
- Gentry, Capt. W. H., Carthage, to Camp Zachary Taylor, Ky., base hospital, for instruction.
- Gettys, Capt. S. L., St. Louis, to Camp Dodge, Iowa, base hospital.
- Glaser, Lieut. M. J., St. Louis, to Fort Riley for instruction.
- Grace, Lieut. C. M., Chillicothe, to Fort Riley for instruction.
- Grote, Lieut. O. A., Moberly, to Fort Riley for instruction.
- Gulman, Lieut. C. N., St. Louis, to Fort Riley for instruction.
- Gullic, Lieut. J. F., Koshkonong, to Fort Riley for instruction.
- Gzell, Lieut. R., St. Louis, to Fort Riley for instruction.
- Hagerty, Lieut. M. E., St. Louis, to Camp Beauregard, La.
- Hall, Lieut. K. H., St. Louis, to Fort Riley for instruction.
- Hammersley, Capt. G. O., Campbell, to Fort Oglethorpe for instruction.
- Hancks, Lieut. J. A., Koenig, to Fort Riley for instruction.
- Henke, Lieut. C. F., St. Louis, to Fort Riley for instruction.
- Henson, Lieut. L. L., West Eminence, to Fort Riley for instruction.
- Herbst, Lieut. F. P., Kansas City, to Fort Oglethorpe for instruction.
- Hofmann, Lieut. O., Kansas City, to Camp Pike, Ark.
- Horn, Lieut. J. L., Williamsville, to Fort Oglethorpe for instruction.
- Ingram, Lieut. W. C., Browning, to Fort Oglethorpe for instruction.
- Irland, Capt. R. D., Kansas City, to New York Neurological Institute, for instruction.
- Jones, Lieut. A. E., Kansas City, to Fort Riley for instruction.
- Jungk, Lieut. C. G. W., St. Louis, to Fort Oglethorpe for instruction.
- Keeling, Lieut. F. V., Elsberry, to Fort Oglethorpe for instruction.
- Kelly, Lieut. E. H., Kansas City, to report to the commanding general, Central Department.
- Kirsch, Lieut. F. W., St. Louis, to Fort Riley for instruction.
- Lake, Lieut. N. E., Kansas City, to Fort Riley for instruction.
- Levy, Capt. A., St. Louis, to Camp Dodge, Iowa, base hospital.
- Loew, Capt. E., St. Louis, to Fort Riley for instruction.
- Lotz, Capt. J. A., St. Louis, to Fort Riley for instruction.
- Lowder, Lieut. O. H., Moselle, to Fort Riley for instruction.
- McCormick, Capt. F. L., Moberly, to Fort Riley for instruction.
- McCulloch, Capt. G. A., Excelsior Springs, to Fort Oglethorpe for instruction.
- McNay, Capt. A. L., Pacific, to Fort Riley for instruction.
- Mairs, Lieut. E. J., Laredo, to Fort Riley for instruction.
- Mankopf, Capt. B. E., New Haven, to Fort Oglethorpe for instruction.
- Mayer, Capt. O. B., Centralia, to Camp Logan, Texas, base hospital.
- Marten, Lieut. W. F., St. Louis, to Fort Riley for instruction.
- Martin, Lieut. C. F., Kansas City, to Fort Riley for instruction.
- Martin, Lieut. C. P., St. Louis, to Fort Riley for instruction.
- Moskop, Lieut. P. G., St. Louis, to Fort Riley for instruction.
- Noe, Lieut. L., Novelty, to Fort Oglethorpe for instruction.
- Norton, Lieut. H. B., Center, to Fort Riley for instruction.
- O'Dell, Capt. T. T., Marionville, to Fort Oglethorpe for instruction.
- Osborne, Lieut. C. D., Otterville, to Fort Riley for instruction.
- Oyler, Lieut. H. W., Mill Grove, to Fort Riley for instruction.
- Parker, Lieut. E. L., Excelsior Springs, to Fort Riley for instruction.
- Patrick, Lieut. P. L., Marceline, to Fort Oglethorpe for instruction.
- Paxon, Capt. C. E., Hannibal, to Fort Riley for instruction.
- Phelan, Lieut. R. A., St. Louis, to Fort Riley for instruction.
- Pieper, Lieut. H. G., St. Louis, to Camp Logan, Texas, base hospital.
- Pierce, Lieut. W., University City, to Fort Riley for instruction.
- Pope, Capt. C. H., St. Louis, to Fort Riley for instruction.
- Porter, Capt. E. S., Milan, to Fort Oglethorpe for instruction.
- Porterfield, Capt. E. P., St. Louis, to Fort Oglethorpe for instruction.
- Proud, Capt. W. C., St. Joseph, to Fort Riley for instruction.
- Reider, Lieut. C. R., St. Louis, to Fort Riley for instruction.
- Reid, Capt. H. L., Charleston, to Fort Riley.
- Revelle, Lieut. C. A., Kansas City, to Camp Dodge, Iowa, base hospital.

SOCIETY PROCEEDINGS

COUNTY SOCIETY HONOR ROLL, 1918

(UNDER THIS HEAD WE LIST THE SOCIETIES WHICH
HAVE PAID THE STATE ASSESSMENT FOR
ALL THEIR MEMBERS)

Robertson, Lieut. R. C., Aurora, to Fort Riley for instruction.
Roselle, Capt. T. A., Palmyra, to Fort Riley for instruction.
Scherer, Lieut. P. H., St. Louis, to Fort Riley for instruction.
Schisler, Lieut. E. J., St. Louis, to Camp Dix, N. J., base hospital.
Schmid, Capt. W. F., St. Joseph, to Camp Grant, Ill., for instruction.
Scott, Lieut. C. D., St. Louis, to Camp Grant, Ill., base hospital.
Scott, Lieut. J. B., Marceline, to Fort Riley for instruction.
Shirley, Lieut. G. H., Bagnell, to Fort Riley for instruction.
Shrader, Capt. E. W., Moberly, to Fort Riley for instruction.
Shumate, Lieut. L. S., Reeds Spring, to Fort Riley for instruction.
Simmons, Capt. B. B., St. Joseph, to Fort Riley for instruction.
Smith, Lieut. F. J., St. Louis, to Fort Riley for instruction.
Smith, Capt. O. A., Farmington, to Camp Pike, Ark., base hospital.
Snider, Capt. J. S., Kansas City, to Fort Riley for instruction.
Standly, Capt. E. D., Brookfield, to Fort Riley for instruction.
Stein, Lieut. W. F., St. Louis, to Fort Riley for instruction.
Stockfleth, Lieut. P. H., Cameron, to Fort Riley for instruction.
Streiby, Lieut. U. G., Brownington, to Fort Oglethorpe for instruction.
Sullivan, Lieut. E. W., Osceola, to Fort Riley for instruction.
Summers, Capt. W. R., Springfield, to Camp Pike, Ark.
Thomason, Lieut. H. E., Kansas City, to Fort Riley for instruction.
Tooker, Lieut. C. W., St. Louis, to Camp Pike, Ark., base hospital.
Traubitz, Lieut. A., Vanduser, to Fort Riley for instruction.
Underwood, Lieut. A. M., Holstein, to Fort Riley for instruction.
Vezeau, Lieut. S., St. Louis, to Fort Riley for instruction.
Vierling, Lieut. O., St. Louis, to Fort Riley for instruction.
Walsh, Lieut. L. S. N., St. Louis, to Washington, D. C.
Weber, Lieut. F. S., Farmington, to Fort Riley for instruction.
Weir, Lieut. L. R., Lathrop, to Fort Riley for instruction.
Werner, Lieut. A. A., St. Louis, to Fort Riley for instruction.
Weygandt, Lieut. S. F., St. Louis, to Fort Oglethorpe for instruction.
Wiley, Lieut. R. E., Sikeston, to Fort Riley for instruction.
Wilfley, Capt. O. S., Webb City, to Camp Shelby, Miss.
Wood, Lieut. V. V., St. Louis, to Camp Pike, Ark.
Wood, Lieut. W. L., Bolckow, to Fort Riley for instruction.
Wright, Capt. G. D., St. Joseph, to Fort Oglethorpe for instruction.
Young, Capt. W. B., St. Louis, to Camp Bowie, Texas, base hospital for instruction.

Taney County Medical Society, Nov. 17, 1917.
Webster County Medical Society, Nov. 21, 1917.
Wright County Medical Society, Dec. 3, 1917.
Schuyler County Medical Society, Dec. 4, 1917.
Platte County Medical Society, Dec. 5, 1917.
Madison County Medical Society, Dec. 17, 1917.
Livingston County Medical Society, Dec. 19, 1917.
Ste. Genevieve County Medical Society, Dec. 22, 1917.
Benton County Medical Society, Dec. 24, 1917.
Adair County Medical Society, Dec. 27, 1917.
Carter-Shannon County Medical Society, Jan. 9, 1918.
Chariton County Medical Society, Jan. 11, 1918.
Holt County Medical Society, Jan. 21, 1918.
St. Clair County Medical Society, Jan. 21, 1918.
Barton County Medical Society, Jan. 22, 1918.
Henry County Medical Society, Jan. 24, 1918.
Moniteau County Medical Society, Jan. 28, 1918.
Camden County Medical Society, Feb. 1, 1918.
Scott County Medical Society, Feb. 2, 1918.
Cedar County Medical Society, Feb. 8, 1918.
Clark County Medical Society, Feb. 8, 1918.
Cooper County Medical Society, Feb. 13, 1918.
Atchison County Medical Society, Feb. 18, 1918.
Ralls County Medical Society, March 10, 1918.
Pulaski County Medical Society, March 11, 1918.
Pemiscot County Medical Society, March 25, 1918.
Cape Girardeau County Medical Society, March 28, 1918.
Vernon County Medical Society, March 28, 1918.
Putnam County Medical Society, April 11, 1918.
Cass County Medical Society, April 13, 1918.
Laclede County Medical Society, April 15, 1918.
Clay County Medical Society, May 2, 1918.
Newton County Medical Society, May 2, 1918.
Jefferson County Medical Society, May 8, 1918.
Pettis County Medical Society, May 11, 1918.
Johnson County Medical Society, May 31, 1918.
Macon County Medical Society, June 24, 1918.
Gentry County Medical Society, July 11, 1918.
Davies County Medical Society, July 15, 1918.
Laclede County Medical Society, Aug. 9, 1918.
Marion County Medical Society, Sept. 9, 1918.

ST. LOUIS MEDICAL SOCIETY

Meeting of the Council, Oct. 11, 1918

The meeting was called to order at 8:50 p. m., by the chairman, Dr. Elsworth S. Smith.

The minutes of the special meetings of June 26, July 10, August 6, and the regular meeting of June 12 were read and approved.

On motion the regular order of business was suspended in order to elect officers to fill the vacancies of members who have enlisted in the Medical Reserve Corps.

The chair appointed the following to fill the vacancies of councilors: Drs. L. E. Newman in place of

Dr. A. H. Hamel, M. F. Engman in place of F. A. Baldwin, Roland Hill in place of W. C. Gayler, J. Campbell Smith in place of C. S. Rehfeldt, J. R. Caulk in place of E. P. North.

The following were elected to the Membership Committee: Dr. Joseph Hardy, Chairman, Drs. Theodore Greiner and George E. Hourn.

A letter from Dr. F. O. Schwartz resigning from the Ethics Committee was read. His resignation was accepted, and Dr. G. M. Tuttle was elected in his place.

Dr. Willis Hall was elected a member of the Censors Committee to take the place of Dr. John McH. Dean.

Dr. W. E. Holdenreid was elected a member of the Committee on Hospitals to take the place of Dr. Harry R. Hall.

The chair appointed a new Election Committee consisting of Drs. R. M. Funkhouser and George W. Cale, Jr.

On motion the regular order of business was resumed.

A letter from Dr. J. A. J. James resigning from the Society was read and his resignation accepted with regrets.

A letter from Dr. G. H. Wilson stating that he was a member of the Knox County (Ind.) Medical Society was read. The secretary was instructed to take this matter up with the Knox County Medical Society, as Dr. Wilson had never transferred his membership.

A letter from Dr. E. J. Goodwin, Secretary of the Missouri State Medical Association, was read, stating that Dr. Benjamin M. Hypes had been appointed acting Councilor of the Twentieth District in the absence of Dr. A. H. Hamel.

A letter from Dr. Otto F. Claus, resigning from the Society, was presented and his resignation accepted with regrets.

A letter from Dr. F. A. Baldwin, resigning from the Council and various committees was read and his resignation accepted with regrets.

The secretary read the report of the Library Committee. On motion the report was adopted and the Committee granted the privilege to move bookcases into the Business Bureau office to relieve the congestion of books on the third floor.

The secretary presented the treasurer's report of the receipts and expenditures for the month of September, which was accepted.

Dr. Engelbach reported orally for the Program Committee and stated that Dr. Emerson of Indiana, would deliver an address before the Society sometime in November.

The secretary read the report of the Bartscher Fund Committee, which was adopted.

On motion the committee was allowed to take money for special taxes on the Coe property from the income instead of from the principal.

A letter from Mrs. Grote in regard to dues of Dr. Grote was read.

On motion the secretary was instructed to notify Mrs. Grote that Dr. Grote was exempt from 1917 and 1918 dues in the Society but that \$6, the amount due the Missouri State Medical Association, should be paid.

Councilors present: Drs. Funkhouser, Kuhlmann, Cale, Tupper, Elsworth S. Smith, Koetter and Engman. Councilors absent: Drs. Baldwin, North, Gayler, Rehfeldt, Hamel, Kane.

Meeting of Oct. 12, 1918

The meeting was called to order at 8:55 p. m. by the president, Dr. Elsworth S. Smith. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following: "Prevalence and Prophylactic Treatment of Influenza," by Dr. G. A. Jordan.

"Bacteriology of the Spanish Influenza," by Dr. George Ives.

Discussion by Colonel Freeman, Major Ravold, Major Kuhlmann, Major Warfield, Drs. Henrietta S. Borck, Frank A. Glasgow, Cleveland H. Shutt, Robert Barclay, W. D. Aufderheide, L. A. Milikin, M. J. Lippe, J. V. Cooke and Paul C. Scholz; Drs. Jordan and Ives closing.

A letter was read from Representative L. C. Dyer requesting the cooperation of the St. Louis Medical Society in securing a suitable building in St. Louis for a general hospital for treating wounded and disabled soldiers who return from overseas and whose homes are in or near St. Louis.

Dr. Shutt moved that a committee of three be appointed to assist in this work. Seconded by Dr. Schisler. Carried.

Attendance 112.

ALBERT F. KOETTER, M.D., Secretary.

Meeting of Oct. 19, 1918

The meeting was called to order at 9:30 p. m. by the president, Dr. Elsworth S. Smith.

As there was not enough members present to constitute a quorum, the minutes of the previous meeting and other business were dispensed with.

The scientific program consisted of the following: "Ablatio Placenta, with Report of Case Treated by Cesarean Section," by Dr. William H. Vogt.

Discussion by Dr. Frederick J. Taussig; Dr. Vogt closing.

"Spasmodic and Infantile Convulsions," by Dr. Jules M. Brady.

Discussion by Drs. William Engelbach and William McK. Marriott; Dr. Brady closing.

Attendance 19.

GEORGE E. HURN, M.D., Secretary pro tem.

WASHINGTON UNIVERSITY MEDICAL SOCIETY

Fifty-Second Meeting—Oct. 14, 1918

1. EXHIBITION OF CASES.

A. A CASE OF LEUKEMIA OF THE SKIN.—By DR. CHARLES E. GILLILAND.

This case is presented because of the presence of curious nodules and profuse discoloration in the skin. Patient F. L. is 63 years of age, married, white, bookkeeper. Entered hospital Sept. 5, 1918.

Family History: Mother died at age of 35, slow consumption. Father died at 74 years of tuberculosis of the bowels. Past History: Neisser infection and penile ulcer in early manhood; no secondaries. About thirty years ago had thirty-day fever. For many years patient had pruritus ani which was very annoying but has not bothered him for the past six years. In 1912 a nodule was noticed on the perineum, this was opened and the lesion has not entirely healed as yet. Patient has always been robust and in good health. Present Illness: For many years there was a small callous spot above the right eyebrow; nine

months ago patient picked this with a needle to let out blood, then in a few days there was a discolored area at this site. Iodin was applied and there was improvement at first but soon the condition showed extension. Then the area was treated by freezing and improvement was at first noticed but soon further extension was evident. Then shortly after small nodules were noticed in the skin of the face and the trunk, some of them were discolored bluish. These lesions seem to be increasing in number. The process seems to be progressing.

Physical Examination: There are several infected teeth. The heart is enlarged and there is a systolic murmur at apex and base of the heart. The spleen is palpable just below the costal margin. There is a perineal fistula which does not communicate with the urethra.

When the patient entered the hospital there were numerous nodules in the skin of the face, arms and trunk; fewer in the arms and lower extremities. Many of these nodules were discolored a bluish purple in the middle and fading out toward the periphery. The area of the skin which is free from nodules shows a yellowish discoloration, like that of a bruise. Above the right eyebrow the largest nodule of all is to be seen. It is elevated, of deep purple, definitely resistant, about 1½ by 3 cm. This is the site of the first lesion. All the nodules are slightly elastic, fairly definitely localized and the skin is elevated to some extent on their site. There are some, however, which show no elevation in the skin.

Blood on admission showed 4,960,000 reds; 6,800 whites; 75 per cent. hemoglobin. The differential count was lymphocytes 30 per cent., large mononuclears and transitionals 15 per cent., polynuclears 55 per cent. During the patient's stay in the hospital purplish discoloration has extended and now covers most of the face. The skin is indurated throughout this area of discoloration. The patient has grown weaker and has lost some weight. He has been given Fowler's solution, 3 mm. three times a day, and roentgen-ray treatments. There has been no marked improvement. The blood count has not varied markedly from the figures above given. There has been some increase in the proportion of the mononuclear cells. No myelocytes have been found. Wassermann test negative; urine negative. Blood pressure, 150 systolic, 97 diastolic. Blood has been found in the stools on two or three occasions.

A nodule was removed from the middle of the back and a microscopical section shows the lymphoid spaces filled with small round cells. These seem to extend out from a certain point of first appearance and dissolve the connective tissue before them. The skin section is that of a patient with leukemia.

The things that have to be considered here are: Atypical leukemia, sarcomatosis, and chloroma.

DISCUSSION

DR. BARNEY BROOKS: This case, at present, may be typical of "leukemia of the skin." In the absence of the characteristic changes in the blood it hardly seems a justifiable diagnosis. Also the onset was characterized by a local skin lesion and the disease has subsequently spread from the area of the initial lesion. This fact suggests that the condition is a new growth.

This case illustrates another point. Local skin lesions should, as a rule, not be cauterized or treated with corrosive chemicals. Such lesions should be excised. Often following cauterization a seemingly benign lesion may rapidly develop into a malignant tumor.

DR. DOCK: As Dr. Gilliland said, when the patient first came in he showed very little discoloration. At that time the face was different. There were flat infiltrations above the eyebrow that have disappeared now and also extensive flat infiltration in the cheeks. These have almost entirely disappeared; the patient as regards color is very much more striking than before, but as regards infiltration is very much better. The probability is that the change is the result of the roentgen-ray treatment. The diagnosis of leukemia could not be made, of course, from anything but the anatomical examination and to make a diagnosis of leukemia in a patient who does not show any blood symptoms is not always a good thing to do, but the specimens that Dr. Gilliland mentioned justifies it in this case. The condition is distinctly not sarcomatous but there are areas of lymphoid infiltration through the skin. They are not uniform—in seat—in some places they are in the papillary layer, sometimes in the corium and sometimes in the fat. Sometimes there are large plugs of cells in the lymph spaces, up to fifteen to twenty cells wide.

The patient was seen by Dr. Fordyce of New York. Dr. Fordyce remarked that the skin looked very much like those Kaposi showed in connection with his early case of leukemia of the skin. In that case, infiltrations of the skin were much more extensive and more like sarcoma of the skin. They appeared like small or medium-sized tumors without vague margins. There has been a very extensive breaking down of the blood in the skin. When the patient first came here, the skin did not have so many blue spots, but had a marked greenish color which looked like jaundice.

One more thing—whenever there is a skin or subcutaneous lesion in which histological examination is necessary, one should not stop at one specimen. One should get as much tissue as possible. It might easily happen that the one bit of material would be in a different stage from the kind we need.

B. A CASE OF SPINAL CORD TUMOR.—By DR. FOREST STALEY.

Patient is a woman 24 years of age, married, without children. She came into the hospital, Oct. 3, 1918, with a chief complaint of paralysis of both legs. The family and past histories are negative. The onset of the present illness began when the patient was 16 years of age. The first symptom noted was difficulty in walking, especially when lifting feet. About three months after onset of illness the symptom had become aggravated and she would drag her feet when walking. Four months following onset it was almost impossible to move about. She went to the family physician, who pronounced her condition as a progressive myelitis. Six months after onset of illness patient had lost completely the use of her legs. The treatment up to this time had simply been electrical treatments advised by the family physician.

About eight months after onset of illness she was completely paralyzed and has remained in this condition since. For the past eight years she has been going to various practitioners, including osteopaths, chiropractors, Christian Science healers.

Present examination shows a complete sensory and motor paralysis below a line on a level with the ensiform cartilage. Deep pressure sensation however, is everywhere present down to the toes, and joint sensation is present but impaired. Pain, temperature and touch are completely lost below a line previously mentioned. There is tenderness over the fourth dorsal vertebra, which corresponds to the sixth spinal

segment. Blood Wassermann and spinal Wassermann were negative.

Patient was operated on October 10, and a laminectomy was done. On opening the canal no extradural fat was encountered and what was taken to be the dura bulged up against the bone. An irregular, nodular-looking mass lay to the left of the cord and at first was taken for an intradural tumor. It extended out into the transverse process of the fourth vertebra. The spinal cord did not pulsate at the level of this mass. The tumor, it further developed, was found to be extradural and through the center of it ran what was taken to be the fourth root. The tumor was readily dissected from the dural surface and removed. It was noted that the tumor had eroded the body of the vertebra on which it was resting. The rest of the tumor was removed with a curette and it was found that it extended throughout the left lateral side of the vertebrae, and what was taken to be the aorta could be seen pulsating at the base of the cavity.

Postoperative course was entirely uneventful. As yet there is no marked improvement in patient's condition, although there are a few definite points to be noted. Now she has the sensation of pain to pin-prick over the lower extremities. The sensation to pin-prick is keener on the back of the legs than in front. Patient still has no voluntary movements of toes, but the toes move much oftener now than before operation involuntarily. Before operation patient was absolutely sure that she had no movement in the rectus abdominis muscle, but now this muscle can be contracted. There is still no sensation in the anterior abdominal wall. Reflexes are as before operation. At times patient states that there is an indefinite sensation, tingling in character, which is present in the lower extremities—she did not have this before operation.

It is too early as yet to say just what the final result will be, but certainly there is some improvement.

The microscopic section shows the tumor to be a typical fibroma and the diagnosis is, therefore, a fibroma of the spinal meninges, extradural.

DISCUSSION

DR. DOCK: I might call attention to the danger in the practice of making hopeless prognoses. We see very often, as Dr. Sachs said, diagnoses of transverse myelitis. This diagnosis is not very valuable unless one can tell what the cause of the transverse disease is. A regular physician told the patient she had a hopeless disease and that she would die within a given time. The doctor had absolutely no right to say it, and the fact that he did helps the work of the irregular. The patient went to an osteopath, Christian Scientist, and every other kind of person and had a most unfortunate time. In other cases with less serious disease the patient gets well and the irregular gets the credit.

DR. SACHS: The reason that I asked Dr. Staley to present this case is to emphasize the point that every spinal lesion that has any focal symptoms should always be explored. It is very doubtful how much this woman will recover. I was afraid she might not recover at all. She has moved her toes this evening, the first time in nine years. There is a point which will be of great interest and that is to see if a spinal cord that has lost its function can recover after so many years. This case should teach all of us a lesson as to focal spinal lesion. A diagnosis of transverse myelitis is not justified and it is not right to condemn a patient to hopeless disability unless the patient has had a chance at an exploration.

C. CASE PRESENTATION OF MENINGOCELE IN A BABY.—By DR. WILKENING.

DISCUSSION

DR. SACHS: We show this case of unusual meningocele because it was possible to make a diagnosis beforehand that it was a simple meningocele as no strands of tissue could be seen when light was thrown through it. At the base of the meningocele was the vermis of the cerebellum. We are very curious to watch the child as it grows up to see what the involvement of the vermis will do.

2. CHRONIC METRITIS AND CHRONIC SUBINVOLUTION, WITH LANTERN SLIDES.—

By DR. OTTO H. SCHWARZ.

3. A MODIFIED METHOD OF TREATING SCOLIOSIS.—By DR. EWERHARDT.

In order to present the subject matter more clearly the more common theories and methods of treating curvature of the spine will be mentioned.

1. Braces, so constructed as to apply pressure to the convexity have been employed in the past and are much in vogue even today. We disagree with the method because (a) pressure on the lateral convexity tends to increase rather than decrease existing rotation and the deformity of the thorax, and (b) because no brace has yet been offered which can apply the correct pressure or hold a position tending toward correction of the deformity.

2. Gymnastics have always been employed. We believe, correctly applied exercises will act beneficially in (a) functional curves, e. g., where no bony changes have taken place; (b) preliminary to forcible corrective measures in order to increase the flexibility of the spine; (c) after correction has been obtained by forcible measures in order to strengthen the musculature; (d) during the period of forcible correction, that is while wearing the corrective jacket. (e) We believe gymnastics to be harmful when exclusively used as a corrective measure in moderate or severe structural curves.

3. Applying direct pressure on the convexity of the curve; (a) manually, (b) by braces, (c) apparatus, (d) in connection with plaster jackets.

4. Position of patient to correct deformity and holding same with plaster jacket: (a) Patient suspended by head with or without weight attached to feet. (b) Lying prone or on back in appropriate apparatus and traction applied by means of bandages or by direct pressure of mechanical appliance. (c) Lateral position with patient suspended on prominence of curvature.

5. Our own method which has been given fair trial in the Washington University Orthopedic Clinic embodies flexion of the spine as a preliminary position and using the body weight as a means of correcting the spinal deviation. To this is added the necessary twisting of the shoulders and hips to secure the desired derotation of the vertebrae. The outstanding feature of this method is that we do not use direct pressure on the gibosity, that is the lateral-posterior prominence, using as has just been stated the body weight instead. We base our theory on the fact that lateral pressure on the convexity must necessarily increase the tension of the angle of the rib, and thus transmit through its articulations with the anterior part of the transverse processes a pressure which at least would tend to prevent the derotation of the

vertebrae but probably do more and actually aggravate the condition. We therefore aim not to increase the angle tension of the deformed rib. We aim to derotate by twisting the shoulders forward on the side of the convexity and to augment this by applying manual force just before the plaster is setting and in such a way as not to bring pressure on the lateral aspect of the deformity. The manner of placing the body in this corrected position is accomplished by means of special apparatus, the characteristic features of which are that it permits an unobstructed view of the back while the patient is placed in the corrected position; it enables the operator to apply rotary traction at will; and it enables using the body weight as an aid in bringing about correction of the spine.*

DISCUSSION

DR. O'REILLY: Dr. Ewerhardt makes this treatment seem comparatively simple; however, it is a very difficult procedure. All the orthopedists in the world have tried to cure scoliosis, but so far we have not had any striking results. Abbott, claiming to have discovered a new method of correcting scoliosis, said it was just as easy to overcorrect a lateral curve as a clubfoot. Orthopedists thought the millennium had come and everybody was most interested. Abbott's correction of scoliosis has gradually dwindled and he has been able to show but a very few cases of overcorrection, and that is the end most desired in scoliosis. What he has given that is new is the treatment of scoliosis in the flexed position. Dr. Ewerhardt's work started on the same principle, but Dr. Ewerhardt has improved that method by putting the patient in a flexed and lateral position and in this position is able to regulate the amount of correction that he can give the patient and at the same time can see what he is doing. This is one trouble with Abbott's method, as it is hard to tell in what position you have the patient.

Of course, the treatment is slow. It takes many applications and the most difficult thing is the correction of the rotation. It is very easy to force a spine, but the rotation persists and that is the most difficult thing to correct.

I think Dr. Ewerhardt's method of forcing the patient, holding him in the jacket a sufficient length of time to allow the bones to change and then removing the jacket, is a good one. His pictures show one or two cases with a good deal of improvement. He is working on most of them now and I do not believe he is through with any as yet, but they do show improvement and his method is being perfected. I think Dr. Ewerhardt's method marks a distinct advance in the treatment of scoliosis.

DR. SACHS: I would like to ask whether in these cases that have improved you can see any change in the anatomical structure of the vertebrae in the roentgen ray.

DR. EWERHARDT: It is quite distinct at the very apex of the curvature. In the first instance the vertebra is quite wedge-shaped. In the last instance, although the vertebra has not become square, the internal vertebral space is somewhat enlarged and it is just a question of time, we hope, when that will fill in.

4. BONE TRANSPLANTATION: AN EXPERIMENTAL STUDY.—By Drs. BARNEY BROOKS, PAUL FUNKHOUSER, O. S. KREBS, F. C. HOWARD.

The Study of a Method of Increasing the Osteogenic Power of a Free Bone Transplant.

As previously reported, by using intraperitoneal injections of alizarine red in dogs a specific vital stain for new formed bone was obtained. This method makes possible the staining of any new formed bone laid down during the period that the stain is used.

In a second series of experiments, also previously reported, it was noted that the power of regeneration of new bone from a free bone transplant was confined to the periosteal and endosteal surfaces of the transplant, and that if the periosteum and endosteum were completely removed, the free bone transplant failed to reproduce bone. It was also noted that frequently in old animals in which the potential power of osteogenesis of the bone is reduced, that the free bone transplant with periosteum and endosteum did not regenerate new bone.

The object of these experiments was to devise a method by which a defect in a bone of an old animal could be bridged by a free bone transplant with a better prospect of success. The experiments described all have to do with the use of an autogenous free bone transplant of growing bone.

Experimental Method: Dogs were used as experimental animals. The oldest animals available were chosen. The age of the animal was estimated accurately at the conclusion of the experiment, at which time the relation of the epiphyses to the diaphyses of the long bones could be studied.

Complete surgical anesthesia and asepsis were employed. In all experiments included, the wounds healed without infection. After the usual skin preparation the shaft of the left femur was exposed. With a motor saw, two parallel longitudinal incisions, 4 mm. apart and 5 cm. long were made through the cortex of the shaft of the bone. The wound was then carefully closed. The skin sutures were removed on the third day after operation. On the seventh day after operation, the animal was again anesthetized and a section of bone 3 cm. in length was removed from each ulna. The wound in the left thigh was then opened and the transplant which had been outlined at the previous operation was removed by cutting across the ends of the parallel incisions and then lifting out the transplant. Such a transplant showed a thickening of the periosteum and endosteum with beginning new bone formation along the course of the entire transplant. This transplant was then used to bridge the defect in the left ulna. At the same time another graft was removed from the right femur, which had not been subjected to previous operation, and transplanted into the defect in the right ulna. In all cases great care was taken not to injure the periosteum and endosteum of the transplants. Following the operation the animals were given intraperitoneal injections of alizarine red twice weekly. The animals were sacrificed at varying periods after the operation, and the transplants were studied in gross.

This method gives in each experiment two free bone transplants under the same conditions. One transplant was removed from a bone in its normal quiescent state and transplanted immediately. The other transplant was removed from a bone which was at that time producing new bone in response to previous injury. The use of the vital stain made it possible to determine exactly the source and amount of all new bone formed.

Eighteen experiments have been performed. Of these eleven have been completed at the present time. Seven experiments are as yet incomplete. In the experiments which have been completed the animals have been sacrificed at the end of periods varying from twenty-three to sixty-nine days. In the incom-

* See American Orthopedic Surgery, June, 1917.

pleted experiments the results are to be studied after longer periods.

The results of the experiments have been uniform. In all instances the animals have been of sufficiently advanced age that the epiphyses were united to the diaphyses and in most instances all traces of the epiphyseal lines had disappeared. In two experiments there was no apparent difference in the results of the two kinds of transplants, the transplant being successful on both sides. In nine of the experiments there was very distinct difference in the results of the two kinds of grafts. In six experiments there was growth of new bone from both types of transplants, but the amount of new bone formed from the transplant of growing bone was in these instances much greater than from the other kind of transplant. In two of these experiments the amount of bone formed from the plain graft was of such small amount that it was questionable if the defect would have been ultimately regenerated. In the remaining three experiments there was absolute failure of the plain graft and a marked amount of new bone formation, from the graft of growing bone.

Or, summarized in a different manner: In all experiments there were twenty-two transplants of both kinds. In the eleven plain transplants there were three absolute failures and probably two additional failures, or, certainly 27 per cent. failures and probably 45 per cent. failure. While in the transplants of growing bone there was no failure, or, 100 per cent. success.

It follows from these experiments that transplants of growing bone result in a much higher percentage of success than plain bone transplants.

DISCUSSION

DR. LEO LOEB: The work of Dr. Brooks and his associates is interesting from a theoretical point of view and of very great practical importance. Dr. Brooks asked me to speak of some work we had done previously with other tissues and which may have some bearing on his results.

We observed that through regenerative stimuli applied to stationary tumors they can again be induced to grow. Through serial transplantation the growth energy of tumors can be increased. In this case the use of tissue which had been previously stimulated gave better results after transplantation than the use of ordinary tissues.

In a similar way we found that if we used for tissue culture *in vitro* kidney in which eight days previously incisions had been made and in which therefore regeneration had taken place the growth in the culture medium was better than if we used normal resting kidney tissue. Rous obtained similar results. On the other hand transplantation of skin which had been made to regenerate, or serial transplantation of skin did not seem to give better results than the use of normal skin in the case of subcutaneous grafts. Similar negative results were obtained in subsequent work in Dr. McCallum's laboratory.

It is an interesting question to consider why different tissues behave apparently in a different manner. Because of these differences the new facts established by Dr. Brooks and his co-workers are very valuable theoretically. From a practical point of view their work promises to lead to a notable advance in bone surgery.

DR. G. C. ROBINSON: A point that is worth emphasizing in Dr. Brooks' work is the discovery that alizarine would stain new-grown bone. That fact which appears at first sight to be an interesting piece

of laboratory work, is in reality opening up a new method for the study of bone regeneration and bone transplanting. It seems very likely that by the use of this method the whole subject of bone regeneration and bone surgery will be given a new impetus which will prove of great practical value.

DR. SACHS: I do not think the great value of this work can be emphasized too strongly. Of course, we know that a parent is particularly prejudiced about his own child, but I think we are justified in saying that this is one of the most valuable advances in bone transplantation that has been made in a long time.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, Nov. 6, 1918, the president, Dr. Daniel Morton, in the chair.

It being a very rainy evening there were just sufficient members for a quorum. The minutes of the previous meeting were read and approved.

The application of Dr. Solomon Eugene Meluney of Agency, Mo., received its first reading and was referred to the Board of Censors for investigation.

On motion Dr. J. A. French was elected an honorary member of this Society.

W. F. GOETZE, M.D., Secretary.

ST. LOUIS COUNTY MEDICAL SOCIETY

The St. Louis County Medical Society, upon call of the president at the request of County Health Commissioner Dr. Eggers, assembled in Clayton on November 9, to participate in a mass meeting called to consider ways and means of coping with the epidemic of influenza. Representatives of the clergy and the medical professions and prominent laymen from all parts of the county were present and the problem discussed in all of its aspects. After adjournment of the mass meeting the Society was called to order by the president and a resolution passed that this meeting should take the place of our regular monthly meeting due on Wednesday, November 13. A communication from the Missouri Council National Defense, Medical Section, was read, requesting that no action be taken excluding from membership members of the profession on account of being of alien birth or having failed to enroll in either Medical Reserve Corps or Volunteer Medical Service Corps. A resolution was passed acceding to this request.

The Society then had the privilege of listening to a short, but most interesting address by one of its members, Capt. J. H. Armstrong, now in U. S. service, on the management and treatment of influenza and its sequelae in the cantonments.

A. CONWAY, M.D., Secretary.

TEXAS COUNTY MEDICAL SOCIETY

The Texas County Medical Society held its annual meeting at Houston, November 12. After the transaction of miscellaneous business, the following officers were elected for 1919: James R. Womack of Houston, president; John T. Robertson of Cabool, secretary; William A. Covert of Houston, treasurer.

The society ordered the dues of its members who are in active service in the war to be paid out of the funds in the treasury of the society, thus maintaining these members in good standing.

J. T. ROBERTSON, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1918, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Nonofficial Remedies":

SOLARGENTUM-SQUIBB.—A compound of silver and gelatin containing from 19 to 23 per cent. of silver in colloidal form. It is used in solutions containing from 1 to 25 per cent. or more. It is also used in the form of bougies or suppositories. No precipitate is produced when sodium chlorid or albumin solutions are added to solutions of solargentum-Squibb. E. R. Squibb and Sons, New York (*Jour. A. M. A.*, Oct. 12, 1918, p. 1219).

BENZYL ALCOHOL.—Phenmethylol.—An aromatic alcohol occurring as an ester in tolu and other balsams, and produced synthetically. It is being used as a local anesthetic by injection and by application to mucous membrane. It is said to be practically non-irritant and nontoxic in the ordinary concentration and dosage. From 1 to 4 per cent. solutions in physiological sodium chloride solution are commonly used for injection anesthesia.

PHENMETHYLOL.—A nonproprietary brand of benzyl alcohol complying with the tests and standards for benzyl alcohol. Hynson, Westcott and Dunning, Baltimore, Md.

PHENMETHYLOL AMPULES, 1 PER CENT.—H. W. AND D.—Each ampule contains 5 Cc. of a sterile solution of phenmethylol H. W. and D. 1 Gm. in physiological sodium chloride solution 99 Gm. Hynson, Westcott and Dunning, Baltimore, Md.

PHENMETHYLOL AMPULES, 2 PER CENT.—H. W. AND D.—Each ampule contains 5 Cc. of a 2 per cent. solution of phenmethylol H. W. and D. in physiological sodium chloride solution. Hynson, Westcott and Dunning, Baltimore, Md.

PHENMETHYLOL AMPULES, 4 PER CENT.—H. W. AND D.—Each ampule contains 5 Cc. of a 4 per cent. solution of phenmethylol H. W. and D. physiological sodium chloride solution. Hynson, Westcott and Dunning, Baltimore, Md. (*Jour. A. M. A.*, Oct. 19, 1918, p. 1313).

PNEUMOCOCCUS ANTIGEN (ROSENOW), LILLY.—A pneumococcus vaccine prepared by digesting a suspension of pneumococci until the bacteria are partially autolyzed. E. C. Rosenow believes that the protective power of this vaccine is greater than that of one prepared in the usual way. It is marketed in 5 Cc. vials, each Cc. containing 20 million partially autolyzed pneumococci. Eli Lilly and Co., Indianapolis (*Jour. A. M. A.*, Oct. 26, 1918, p. 1407).

PROPAGANDA FOR REFORM

VACCINES IN INFLUENZA.—After study of the evidence as to the value of vaccines against influenza, the Massachusetts committee recommended that the state encourage the distribution of the influenza vaccine intended for prophylactic use but in such manner as will secure scientific evidence of the possible value of the agent. It reported that the use of the vaccine should be considered experimental, and recommended that the state should neither furnish nor endorse any vaccine used for the treatment of influenza (*Jour. A. M. A.*, Oct. 19, 1918, p. 1317).

PHILLIPS' PHOSPHO-MURIATE OF QUININE COMP.—The Council on Pharmacy and Chemistry reports on the extravagance and the absurdity of the claims made for Phillips' Phospho-Muriate of Quinine Comp. by the Charles H. Phillips Chemical Co. It concludes that the preparation is a complex and irrational mixture exploited by means of unwarranted claims, and a survival of the days when fantastic formulas were gravely published, when eminent practitioners gave glowing testimonials for lithia waters that contained none, when no therapeutic claims were too preposterous and no theory too nonsensical to justify the use of all manner of claptrap mixtures. It is explained that Phillips' Wheat Phosphates was introduced when numerous ailments were supposed to be due to a deficiency of phosphorus in our food, and that it was converted into "Phospho-Muriate of Quinine Comp." by the addition of iron, quinin and strychnin (*Jour. A. M. A.*, Oct. 19, 1918, p. 1335).

ILL ADVISED PUBLIC HEALTH ARTICLES.—A "syndicated" newspaper article which discusses Spanish influenza advises that "aspirin may be administered to relieve headaches and body pains." No doubt it would be to the interest of public health and the public pocketbook were medicines taken only on the advice of physicians. The objections to the lay use of aspirin was thus stated by the Council on Pharmacy and Chemistry: The public does not know, as physicians do, that headaches are merely symptoms of other, sometimes very serious conditions, and that they are often the signal for the need of a thorough physical examination and diagnosis. It is true that they are often also the symptoms of very minor derangements, which will right themselves spontaneously; and that, in such cases, drugs like aspirin may give relief and may do no harm. The patient, however, is not educated to distinguish one class from the other, and therefore anything that tends to promote the indiscriminate use of such remedies as aspirin itself is not always harmless. Alarming idiosyncrasies are sufficiently common that the use of the first doses, at least, should require medical supervision (*Jour. A. M. A.*, Oct. 19, 1918, p. 1337).

SERUMS AND VACCINES IN INFLUENZA.—Unfortunately, we as yet have no specific serum for the cure of influenza and no specific vaccine or vaccines for its prevention. The various treatments now being tried are experimental and their value will not be known until all the results are collected, which probably will not be until the epidemic is over. As to serum treatment, the only noteworthy new method so far is the injection in severe cases of influenzal pneumonia of the serum of patients who have recovered from such pneumonia (*Jour. A. M. A.*, Oct. 26, 1918, p. 1408).

SULPHERB.—"Sulpherb" or "Sulpherb Tablets" is one of the nostrums sold by the Blackburn Products Company of Dayton, Ohio. It is advertised by the "fake prescription" method. It is claimed that the tablets contain the extracts or concentrations of cascara, aloes, may apple, nux vomica, black cherry, capsicum, ginger, sarsaparilla, and also calcium sulphide, sulphur and cream of tartar. An examination made in the A. M. A. Chemical Laboratory indicated that "Sulpherb Tablets" are probably compounded from calcium sulphid, sulphur, cream of tartar, and vegetable extractives. Of the vegetable extractives claimed to be present, aloes was indicated and a trace of some alkaloid, the amount of which was too small to permit its identification (*Jour. A. M. A.*, Oct. 26, 1918, p. 1431).

BOOK REVIEWS

THE MEDICAL CLINICS OF NORTH AMERICA, July, 1918. W. B. Saunders Company.

This is the New York number and contains reports from fifteen clinics covering a wide variety of subjects. The publishers announce the next number will be devoted to the work that has been done at the several Base Hospitals in the various camps. Former Surgeon-General Gorgas will contribute the first article, entitled, "Clinical Research in the United States Army Base Hospitals."

BIPP TREATMENT OF WAR WOUNDS. By Rutherford Morison, Professor of Surgery, Durham University; Senior Surgeon, Northumberland War Hospital. London: Henry Frowde, Hodder and Stoughton, Oxford University Press, 20 Warwick Square, E. C. 4, American Branch, 35 W. Thirty-Second Street, New York, 1918. Price, \$1.00.

This is one of the Oxford War Primers. The general technic of the Bipp treatment is given in detail, followed by its application in each type of injury which is further amplified by numerous illustrations showing the results of treatment. C. S.

MEDICAL WAR MANUAL No. 7. Authorized by the Secretary of War and under the supervision of the Surgeon-General and the Council of National Defense. MILITARY SURGERY OF THE ZONE OF THE ADVANCE. By George De Tarnowsky, M.D., F.A.C.S., Surgeon to Cook County and Ravenswood Hospitals, Chicago; Major, M. C., U. S. R., American Expeditionary Force, 1917-1918. Illustrated. Published by Lea & Febiger, Philadelphia and New York, 1918. Price, \$1.50.

This little manual treats with the wounds of war. It is intended evidently to aid the young medical officer who is thrown into contact with injuries which previous experience does not enable him to manage on general principles. A. E. H.

AMPUTATION STUMPS, THEIR CARE AND AFTER-TREATMENT. By G. Martin Huggins, F.R.C.S., Medical Officer to the Government Schools, Salisbury, Rhodesia. Late Surgical Specialist to the Pavilion Military Hospital, Brighton. London: Henry Frowde, Hodder & Stoughton, Oxford University Press, Warwick Square, E. C. 4, 1918. Price, \$2.75.

One receives a thrill of horror when looking through this little book. There are many photographs of stumps of limbs amputated because of war injuries. One thinks only of the needless suffering they represent. They are the most eloquent beck to service that the reviewer has seen. On second thought one must appreciate the value that the experience, dearly bought, must have for those who shall in the future be victims of industrial accidents. It deals authoritatively with the formation and care of the stumps of amputated limbs.

Considered from either viewpoint it is a valuable book. A. E. H.

THE HUMAN SKELETON AND INTERPRETATION. By Herbert Eugene Walter, Associate Professor Biology, Brown University, with 175 illustrations. New York: The Macmillan Company, 1918. Price, \$1.75.

This little book will furnish enlightening entertainment for those who understand the human skeleton. It describes in somewhat poetic form the comparative anatomy of the final human forms. The text is so simply written and the illustrations so numerous and clear that the intelligent layman should be able to follow the presentation.

The author states in his preface that the *motif* of

the book is expressed in the frontispiece. Referring to this, one finds compared the skeleton of a human being and a rampant horse with a kinked tail. The obvious lesson this suggests to the reviewer is that if you kink a horse's tail he will soar up and you become a skeleton. The author's *motif* must remain the only obscure thing in the book. A. E. H.

PRINCIPLES OF BACTERIOLOGY. By Arthur A. Eisenberg, A.B., M.D., Cleveland; Director of Laboratories, St. Vincent's Charity Hospital, etc. Illustrated. St. Louis, C. V. Mosby Company, 1918. Price, \$1.75.

The author understands the particular needs of nurses, for whom the book was written, and his purpose has been accomplished in a commendable manner. The sections on "Modes of Infection, Disinfection and Prophylaxis," the photographic illustrations and the descriptions of bacteriological procedures are among the valuable features of the book. The book should be of great assistance to teachers of bacteriology in training schools for nurses and of value also to technicians in bacteriology as well as to others who wish to obtain elementary conceptions of the field of medical bacteriology with a minimum of effort. G. I.

A TREATISE ON CYSTOSCOPY AND URETHROSCOPY. By Dr. Georges Luys, former intern, Hospitals of Paris; former Assistant in the Department of Urinary Diseases at the Lariboisiere Hospital; Laureate of the Faculty of the Academy of Medicine. Translated and edited with additions by Abraham L. Wolbarst, M.D., New York, Cystoscopist, Beth Israel Hospital; Consulting Urologist, Central Islip and Manhattan State Hospitals. With 217 figures in the text and 24 chromotypographic plates outside the text, including 76 drawings from original water colors. Published by C. V. Mosby Company, St. Louis, 1918. Price, \$7.50.

A distinct service has been rendered by Dr. Wolbarst to the English speaking profession in the translation of this excellent work, which embodies the experience and the teachings of one of the most eminent workers in the field of urology.

The description of both direct and indirect vision instruments and the comparison of the advantages and disadvantages in their employment in diagnosis and treatment are most detailed, and, considering the author's natural prejudice in favor of the direct method and the child of his own brain—the Luys' direct vision cystoscope—surprisingly fair, so that one lays down the book with the feeling that every urologist should be trained in both methods and practice them interchangeably, as the occasion demands.

The sections devoted to diagnosis are very clear but the vivid and beautiful descriptions of bladder pictures as revealed by the endoscope are all but nullified by the colored plates which unfortunately tend to exaggeration both as to size and color. The black and white illustrations on the other hand are excellent.

The discussion of the bladder in uterine cancer and pregnancy is, as stated in the editor's preface, quite unusual in books of this kind, as is in fact the amount of attention given in other parts of the book to conditions in the female. E. M.

A TEXTBOOK OF OBSTETRICS. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Eighth edition, revised and reset. Octavo of 863 pages, with 715 illustrations, 38 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.00 net.

The eighth edition of Hirst's Textbook of Obstetrics is the epitome of gynecic knowledge and a fitting

tribute to the ripe experience of this favorite teacher and author. Following the classic arrangement of obstetric treatises, Anatomy and Physiology, Management of Pregnancy, Labor and Puerperium, then the Pathology, Obstetric Surgery and the Care of the New-Born, in sequence, nothing is omitted which is of value to the student or practitioner. Hirst has a graphic style and a command of language which is attractive and impressive.

All the newer methods of technic are discussed and placed in fair perspective relatively, including such gynecological subjects as come directly into the domain of midwifery; sterility, uterine displacements, dilatations of the cervical canal, extra-uterine pregnancy, etc., are included.

The treatment of pernicious vomiting by corpus luteum has the author's indorsement which is in accord with the experience of the reviewer in a paper before the Missouri State Medical Association, 1918. Eclampsia is presented in its varied aspects and while agreeing with the main theories of treatment our experience with veratrum viride in a series of fifty-two cases with a mortality of two, one a chronic nephritis, the other septic infection (reported 1918, Missouri State Association), leads to the belief that the remedy deserves more than a passing comment.

Such a wealth of material handled in such a manner as is done in Hirst's eighth edition, renders the possession of additional works on this branch of medical knowledge superfluous for the average practitioner.

C. C. M.

A TREATISE ON CLINICAL MEDICINE. By William Hanna Thomson, M.D., LL.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Second edition, revised. Octavo volume of 678 pages. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$5.50 net.

This book is a compilation of the author's ideas and personal experiences. It covers too large a field and too many varied subjects to be thorough. It is devoid of any sound scientific basis or thoroughness which is so necessary today. The first chapter, for example, devoted to "catching cold," is mainly an exposition of his theory of the mechanics of catching cold. Bacteria are not mentioned, contagiousness of colds is ignored, and nothing is said of the frequency of colds in persons of lowered vitality. He classifies pain into six different general classes and treats the pain but lays no stress on the necessity of finding the cause of the pain. Migraine is treated by intestinal antiseptics, the headaches of influenza by dram doses of ergot every two hours, and ergot again in full doses for periodic neuralgias. Part II, on infections, is characterized by the same indefiniteness and lack of valuable information. In typhoid, for instance, no mention is made of the Widal blood culture or leukocytes. He gives no clinical symptoms or signs of the disease, not even the classical hemorrhage and perforation.

In syphilis the Wassermann, Noguchi, blood and spinal fluid tests are not mentioned. Colles' law, however, is mentioned to "show that the syphilitic mother is immune to the infection." Under treatment of syphilis, mercury pills and neosalvarsan are mentioned, but no details and no precautionary measures mentioned, such as physical examination, urine examination, and no particulars regarding administration.

Lobar pneumonia would not be recognized from author's description.

As to the author's treatment of disease, little modesty is shown regarding his "specific," e. g., compound Phenacetin, Pill, Thomson (manufactured by Schieffelin & Co., 170 William St., New York City). He says he is "assured that this combination is quite as specific against influenza bacillus as quinin in ague and mercury in syphilis."

The book is purely a record of the personal experiences of a busy practitioner with here and there a little note of historical interest, but it cannot be considered a modern treatise on clinical medicine.

E. P. B.

GYNECOLOGY. By William P. Graves, M.D., Professor of Gynecology at Harvard Medical School. Second edition, thoroughly revised. Octavo volume of 883 pages, with 490 original illustrations, 100 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$7.75 net.

The second edition of this most valuable work comes to us, two years after the first edition, enriched with many beautiful new plates and about 150 added pages of text. We are pleased to note that the chapter of such importance to the specialist and general practitioner—the Relation of Gynecology to the General Organism—has been further enriched by the addition of a new one treating particularly of the sex impulse. Here are considered quite fully the influence of Freud's work, infantile sexuality, sexual deviation, etc. The chapters on these subjects make the work of exceptional value to all medical men, reminding one of Goodell's efforts years ago to broaden the vision of the "woman specialist."

Throughout the work the author gives his own ideas clearly, based on his experience, though he freely quotes and illustrates the technic of standard writers.

We regret he does not speak at greater length on the use of the cystoscope and the treatment of the common ailments of the urethra and bladder. The man who treats women's ailments must master the details of cystoscopic technic; the advantages of the various positions in making an examination or diagnosis; the strength and best methods of applying the various remedies, etc., for few diseases of women require greater skill in treatment than those ascribed by women to the bladder.

He has nothing to say of the recent ideas of the avoidance of "thorough preparation" of the patient who is to undergo a laparotomy, adhering to the time-honored belief that such thoroughness "insures to a certain extent against postoperative gas-formation" (p. 835).

He gives credit for the use of gauze strips fed from bags to prevent the loss of gauze-pads in the abdomen to Wakefield instead of to Crossen.

He has discarded towel clips and the subcuticular stitch, and he believes in the use of silk-worm gut stitches and commends the use of abdominal drainage. Also he does not give the credit to Stumdorf for the coring out operation for the removal of the endocervix.

But to take exception to some trifling details in matters of opinion concerning technic is not just and shows only a desire to discover some points to criticize in a work which is so masterly. The author is so gifted in his ability to illustrate the various operations which he describes that one scarcely needs to consult the text. We have never seen, for instance, the operations for absence of the vagina so wonderfully shown.

The work fully merits the warmest commendation in every respect.

F. H.

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