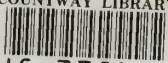



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THE JOURNAL

OF THE

Missouri State Medical Association

THE OFFICIAL ORGAN OF THE STATE ASSOCIATION AND COMPONENT SOCIETIES

ISSUED MONTHLY UNDER DIRECTION OF THE PUBLICATION COMMITTEE

PUBLICATION COMMITTEE

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THE JOURNAL

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The Official Organ of the State Association and Affiliated County Societies

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ADDRESS ALL COMMUNICATIONS TO 3525 PINE STREET, ST. LOUIS, MO.

Volume XI

JULY, 1914

Number 1

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

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } S. P. CHILD, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

PREVENTION RATHER THAN CURE*

President's Annual Address

E. H. MILLER, M.D.
LIBERTY, MO.

It is difficult to write a message to this association that would not be full of oft-told tales and would tell a story not handed down to us by our preceptors and the medical heroes of the past. I would hardly be expected to give my views as to the pathology and therapy of some death-dealing disease; yet from the résumé of each of these topics and the conclusions that have been forced on me by forty years of practical experience in the practice of medicine in Missouri, that will form the basis of my address to-night.

From the fog of varied opinions among the leaders of our profession there has at last come a revolution that seems to me to have united the medical world under one banner, and from every land comes the triumphant shout emanating from the hearts of our profession, "strike at the *cause* of so much sickness and death in our homes rather than administer to relieve sickness after it has fastened its talons in our bodies."

We used to build paper monuments to the medical heroes who met the ravishing diseases of the past that decimated our pioneer colonies, and cured many of the victims by timely medication. We loudly eulogized those who found a cure for cholera and yellow fever, small-pox or diphtheria. "The God bless you" was echoed from the homes in the valleys as well as in the mansions on the mountainside or seashore, and we, as toilers along the road lined by sickness, admired their courage and lauded them for the results of their labors.

But we stand to-day on the threshold of a new era—united to a man, battling for humanity's good and happiness. We build a monument to-day in memory's hall—a monument far above those for the heroes of hard fought battles and brilliant victories, for to-day the heroes we worship have made the results of their battles and victories permanent and full of good to our nation.

We praise, in this new era in our civilization, the physician who by his untiring labors and untold suffering stands on the shores of our seas and lakes and rivers as well as in the heart of our inland cities, and tells the germs of almost all our devastating diseases, "thus far shalt thou go and no farther." We no longer tax our minds so much with the cure of disease, but strive to aid in its prevention.

I wish to ask you, What do you think of it, and where do you stand in the fight? Rather a queer question, but I wish to impress on this body the danger of failure in appreciating the true meaning of the movement. I have often heard the family physician of some prominent citizen, who had risen to some high office in his community, say that he had cured this man of some very bad attacks of sickness, and had it not been for him that citizen would be dead. Under the past order of things he told the truth, but he should not have to say it, for, as his medical adviser, the cause of so much sickness in this man's life should have been removed, barring some incurable malady. I mean by this, that when we officiate at the birth of a child we smile at the parents' happiness and praise the perfect physical condition of the little fellow, take our departure and leave it to battle with all the perils that follow its birth—leave it to make a fight against all the ignorance of poverty and superstition, coupled with friendly advice from the neighbors, until, if it lives, some day you are summoned to relieve it of some malady it should not have had had we done our duty as a follower of the new light in medicine—prevent rather than cure.

* Delivered at the Annual Session, Missouri State Medical Association, Joplin, May 12-14, 1914.

It takes no telescope to show you the conditions in every town or city in our land, where the seed have grown that furnished the foci of so many of the epidemics that have closed the doors of our cities, on account of an epidemic that ought not to have been had we done our duty as a true family physician.

I lay particular stress on the new order of medicine so that by your enthusiasm in protecting your city against the results of neglected duty our legislative committee can have some argument to offer in the presentation of laws we are trying to pass, by showing the effects of your efforts in your city.

Too many hide behind that impenetrable forest called "heredity" in the eugenic fight for life—just give a sigh for the sins of a forefather, and float down the river without a friendly hand to stop the journey to the grave. For shame. Heredity often with tendencies alone hereditarily, surrounding the sick, are often a God's blessing. It is a lighthouse on the rock shores of life that tells us of the hidden danger so we can guard against it. 'Tis a life buoy in the harbor of health that enables us to know of the sunken snags that are beneath the apparent smooth water all around. With the knowledge of these transmitted tendencies, we ought to preserve the lives of many that otherwise would be sacrificed. There never has been a more promising sign of a general uprising of public sentiment along these lines than at present, demanding education in preventive and sanitary lines. So much so that wherever I have spoken to the public on these issues, I can see with what eagerness they grasp any measure that will save them from sickness or suffering.

It is the duty of each county society to try at least to enlighten the public by educational lectures with positive demonstrations of the good a knowledge of the subject lectured on would do.

This is not a new thought at all. But we must present it again if we wish to prevent vetoes of bills passed by the legislature for the benefit of the lives and homes of our commonwealth.

We must present it to our people and through them to the legislators if we wish our committee to succeed in passing any bill that will aid our profession in its fight against commercialism and fraud.

I wish to raise my voice against the so-called quarantine laws as they apply to the rural districts. Strong enough on the face of them, yet the duty of no one to compel the length of time required for each disease. No positive agreement among the physicians of the county in which it is necessary for a quarantine to

exist on this most important part. So the disease runs its course, in many instances, and often a life is sacrificed on this account, or a body maimed for life. Whose duty is it? Unless to you physicians, guardians of our hearths and homes, who can we go to in this dire necessity? Yet I know of dozens of public places that are never fumigated; never cleaned after weeks of crowded audiences, and we flaunt the flag of preventive medicine and sanitary teaching, but never demand that some one be ordered to carry it out.

Our state university has a new professor to teach the theory of preventing disease; but you as family physicians are the ones to point out the danger fearlessly in each individual case and community—asking for some one with positive authority to demand the isolation of any one who can scatter disease in the community in which he lives. I will not give you any history of the sad cases I have known of blighted childhood due to this carelessness and wilful abuse, for I am sure you all have had the same experience in your rural homes; but I do think that we as physicians should demand something better than we have to aid us in giving proper advice to our officers.

You ask the school boards to close the school in which some loathsome disease appeared and turn the children loose on a community, compelling them to attend Sunday school or church, that have never been fumigated since they were built; or you give the same children means to attend a picture show where they are herded together with these same students, the rich as well as the scum of creation. Rather a queer consistency and a good argument against any medical measure we try to ask to become a law. To stand idly by and not raise your voice as a citizen and a physician bars you, in my opinion, from membership in the great army just starting on the march against the common enemy—sickness and death.

As a member of our school board, I oppose the closing of my school because we make our school-houses cleaner and purer than most of our homes, and offer them as a refuge against the disease we are fighting. Send the children to such school-houses to prevent epidemics, instead of letting them drift, uncared for, in the streets or places of public worship. You will observe that I am picturing the surroundings of our rural towns and school-houses, since I administer to that neglected class, and I ask you as family physicians in the rural homes, "How often do you visit your school-houses or churches or places of amusement," and after taking in the surroundings "how often do you raise the danger signal or ask for better sanitary conditions?"

I want to show you some of the inconsistencies of our acts and ask you how you can wonder that our advice when given is never considered. We have individual communion cups in most of our churches and a general glass, dipper or tin-cup for general drinking at the well or cistern in the rear of the building. We furnish no glass or cup for general service on the railroad trains; yet we land you hot and thirsty at some watering place or public gathering, and offer you a cup used by hundreds before you, to quench your thirst from a common basin. Do you ever raise a warning against it as physicians in your community? If not, you are a poor recruit for the army now just starting out. I leave this subject, having just hinted at its benefits.

This is a day of patriotism and it stirs our very souls for vengeance when our flag is insulted and the nation's honor sneered at. Quite a noble spirit, and as citizens of our country we demand apology. Let's see about the spirit flags, when we as physicians are called on to defend the hearth and homes, where we alone are the sentinels, guarding the doors against a far worse enemy than foreign insults or invasions.

Some time ago one of our most noted universities offered a handsome monetary prize with an appropriate medal for the artist who could paint a picture representing the best view of the United States' most prominent spirit.

Twenty-seven artists contended for this prize and many and varied views were offered. The judges were the most prominent figures in our national institutions and legislative halls. These, after a careful study of each picture, viewing them from every standpoint, gave the prize to him who painted a beautiful landscape with our most beautiful mountains and valleys, which had as a most prominent figure in its makeup, the three things that go to make up our national progress more than any or all things else combined—a church where everyone could worship freely according to the dictates of his own conscience; a newsboy selling newspapers, in which every one could spread to the world the thoughts of his life's labor and study, and, nestling on the crossroad of every section of our land, a school-house, where every child is compelled to learn to read and to write and absorb the principles that will make them bread earners and good citizens of a noble country. I will not dwell on the beauties of this painting, or offer a word of praise to the artist, but I ask you what your contribution is toward the building of a nation's future on this foundation? I leave the church in better hands to protect its portals and ask you how you feel toward the protection of our rural or

small city and village school—the bulwark of our nation's future greatness. Did it ever appeal to you what becomes of all our infant and child prodigies that fill our communities and are looked on as wonders in the school days to come—the idols of their homes and the praise of their community? They enter school, grow up and the scene changes. Many of them, no longer prodigies admired and praised by all, become laggards in their classes, are dull and stupid in their work, fail to pass in their examinations and finally drift out into the world, ignorant and incapable of entering into any competition in the business struggle for maintenance.

We wonder at such results, condemn the teacher and assault the common educators of our schools. *Truly some one is to blame.* As a thoughtful and conscientious physician, can't you locate the cause? With 10 per cent. of our schoolchildren defective in their vision, 16 per cent. with breathing organs obstructed by growths or injuries not looked after—as if it was no one's business to do so, with 12 per cent. unable to hear without the greatest care and attention, with a school-house insanitary in almost every particular, can't you see how one-half of these abnormal students' time is taken up by trying to overcome these obstacles to progress? So they faint by the wayside.

Someone is to blame for this condition of affairs in the start of life in our country schools, and we physicians ought to know that these defects exist and, as advisers, lessen the dangers ahead for these children, *which they are not responsible for.*

Miss Helen Kellër, known and admired so much by everyone—she who has passed through all the terrors of these defects, and her rendition of her feelings when she was living in utter darkness—makes us shudder at the storms and sufferings she has endured.

In an address to the world, especially to her beloved country, to prevent these horrid defects—especially blindness—from crushing the life out of so many of our children, she seems to have touched the heart-cords of the American press until the echo of their editorials have aroused the whole nation to a realization of our neglect in the past.

These echoes have aroused the medical world until we are beginning to wonder at our failure as family advisers, to raise the danger signal long ago, and we beg and implore every member of our great profession to enlist for the war against this evil in the lives of our neglected little ones.

Why was the newsboy so prominent a figure in this prize painting? The American press is truly the educator of our citizens, breathing

daily the spirit of our country's foundation and condemning anyone who dares to assail our constitution and the principles it stands for.

How long would you support a paper whose editor would attack our laws or freedom? The spirit of patriotism inherent in every breast would rise in its might and banish it from the land.

How long would our church members support a periodical or journal that scorned the Being that stands at the head of all religion, that sneered at the teaching of our Master, or who scoffed at the beauties and benefits of religion?

At once, you would hold up your hands in horror and condemn such a paper as unfit to enter the door of any home.

How long would you support *The Journal of the American Medical Association* if it allowed to be published on its pages any editorial or advertising matter that had been proved detrimental to the welfare of its readers?

How long would you continue your membership in the Missouri Medical Association if its mouthpiece—THE JOURNAL of the Missouri State Medical Association—were to scatter through its contributors any insanitary measure that had been proved detrimental to the health and life of the inmates of our homes? Not long, I think.

How long ought the members of our State Medical Association to contribute in any way toward the support of any periodical or journal that heralds to the world as good and beneficial any drug or proprietary medicine that has been shown by the National Analytical Department or the department employed by the American Medical Association to detect the worthy proprietary remedies and the frauds that are so often the cause of death among our patrons, and thus warn us of the danger of using such frauds?

How long shall we submit to such outrageous publications and sanction their acts by our contribution to such journals?

I hint at these evils and leave the remedy in your hands. Be just to yourselves as members of a profession battling to prevent rather than cause disease. Be just to the homes so often stricken by these advertisements and condemn them by leaving such periodicals sadly alone.

The fight is on, from the head of our profession to all of its integral parts, and you must take your stand for good or for evil.

May I call your attention to two proposed amendments to our constitution, suggested by your committee on constitution and by-laws. The first looks to the election of 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.

Amend Article 8, Section 3, to read as follows: "The president, vice-president, councilors and orator 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 the annual session and who has not been a member of the association for the past two years."

The wisdom of these amendments, I am sure, will appeal to your best judgment, for it places the election of our officers in the hands of delegates chosen from the county societies all over the state and prevents any interference with the scientific program, and expedites the business of the association greatly.

I have purposely avoided any praise for the members of our association who, by their untiring work, have made for themselves national reputations, and through them our association has become more prominent in our national medical progress, for that would be useless, since each of you have observed with much pride this advancement.

I wish to thank the members all over the state for the many kind acts shown me wherever I have visited, and by their kind advice and aid the term of my office has been made far more pleasant and its duties much lighter. I have noticed in the twelve or thirteen county societies that I have visited such a spirit of advancement of interest that I much more appreciated the honor you conferred on me by electing me president of such a grand association.

Pardon me, in closing, if I quote you a few verses of a poem, so applicable in connection with this message, which I am sorry to say deals mostly with our shortcomings rather than praise for our labors. Yet this is such a picture of our professional life, both at home and among our patrons, I ask your indulgence while I read it.

It isn't the things you do, dear,
It's the things you leave undone,
That gives me a bit of heart-ache,
At the setting of the sun.

The stone you might have lifted,
Out of my lonely way,
The bit of heartsome counsel
You were hurried too much to say.

The loving touch of the hand, dear,
The gentle, winning tone,
Which you had no time or thought for,
With trouble enough of your own.

It isn't the things you do, dear,
It's the things you leave undone,
That leaves me a weary heart-ache,
When you from me are gone.

PROFESSIONAL REMINISCENCES AND A
PLEA FOR MEDICAL UNITY*

Oration on Medicine

T. F. LOCKWOOD, M.D.
BUTLER, MO.

It affords me much pleasure to address you on this splendid occasion. It has been my ambition since a mere student of medicine to some day be able to meet and to mingle with the dignitaries of the profession.

When it was officially announced at the last meeting in St. Louis that I was to deliver the oration on medicine at this meeting I became selfconscious of my inability to acquit myself in a manner to do honor to this association and with credit to myself. But when the name of Dr. Potter followed in quick succession to fill a like position in the surgical section I felt greatly inspired at having such a man to follow and to foster me in this undertaking.

It is indeed a happy coincident which I am proud to relate that Dr. T. E. Potter was one of my first and best teachers in medicine. He was the first to instill into my youthful brain the principles of the profession which I have endeavored to practice throughout my medical career. It was the coalescence of teacher and student and the culmination of certain events that prompted me to present the message which I bring to you to-night. For teacher and pupil to meet again after years of separation is like the happy meeting of father and son who have long been parted. Not the prodigal son, I trust, who wasted his time and opportunities, but the meeting of a good old-fashioned father and the obedient son whose mutual love for each other has no bounds. So if there be any good in me whatever, let it be ever so little, I wish to dedicate it all to Dr. Potter's own honor and glory. Young man in the profession, though you may be high up the ladder in medical and literary learning, let me gently admonish you to take your hat off politely and reverently to the old man in medicine. He may be old, tottery and stooped with years of labor and professional hardships, he may smell of aloes, rhubarb and boneset, he may not dress in the latest fads and fashions, yet he possesses a knowledge gained by years of practical experience that your library does not contain and that you cannot ever hope to obtain other than by long schooling of like experience. So my dear child of Æsculapius do not allow yourself to be inclined to ridicule the faithful fathers of medicine, for could you but know the trials and sleepless hours through which these conservative and resourceful men have passed who

practiced the healing art long before pharmaceutical manufacturers made your medicine, telling you for what it was intended, how and when to give it and so on, you would have unlimited respect for these men of the pill-tile, mortar and pestle age. It is much easier to practice medicine to-day than it was thirty or forty years ago. Physicians of the primitive age spent many happy hours in the woods gathering drugs from Nature's own laboratory. They learned by sight, taste and smell many of the potent remedies now used in the cure of diseases, and many of them would not exchange the rare bit of knowledge thus gained for any flamingly written statement of properties and therapeutic usages of drugs printed on labels of proprietary and pharmaceutical remedies on the market to-day.

Public respect is lacking in a measure with the commonalty for the doctor who writes prescriptions for his patient instead of compounding and dispensing his own medicine. Commercialism and proprietary medication have robbed the physician of much of his former prestige and professional and social dignity. We no longer have the family doctor of old, whose advice was sought and freely given in all things of vital interest. For our old family physician to enter the sick-room when I was a boy was like a visit from an angel of peace, so soothing and consoling was his presence. How pleasant it would be could we again redeem ourselves and command the true respect and fellowship of those whom we serve, but we must humbly submit to the inevitable passing of the old and conform to the new.

My subject is slightly tangent from the orthodox subjects usually presented on like occasions, therefore, a mild diversion from the routine and professional stringencies, I trust, may be relished by those present.

It is the contrast in material things of this age that makes life worth living. If medical men were all alike in every respect, in characteristics, in educational attainments, in personalities, in other words, if we were all on one plane professionally, we would have no standard by which to measure our medical efficiency. We must necessarily have an opposite by which to contrast the difference between good physicians and better physicians. Nature in forming the universe established an opposite in everything. We have for instance, heat and cold, wet and dry, sickness and health, life and death, heaven and hell, God and the devil and so on, each of which is either better appreciated or greatly augmented by the presence of the other. If we were never sick we could not enjoy health to its fullest extent. If there was no death life would be void of its sweetness.

The following will further illustrate the contrast in material things. As we travel west-

* Delivered at the Annual Session Missouri State Medical Association, Joplin, May 12-14, 1914.

ward across the broad prairies of Kansas and eastern Colorado, and just as our eyes are becoming weary from viewing the vast plains of so much sameness, Nature comes to our relief and hoists before our tired vision the range of rocky mountains with all the grandeur in keeping with Her majestic powers. As the great crags stand out in bold relief, silhouetting fantastic figures against the horizon, we stand and admire amazingly the perfect handwork of Him who created all, and are thus changed from a subdued spirit of exhausted energy to a happy realization of renewed interest in things, giving us a stronger and better appreciation of this life and the one yet to come.

Between extreme opposites we have myriads of varieties of everything composing the universe. All forms, fashions, colors and conditions in existence incline toward one extreme or the other, and we are thus enabled to classify and to judge the merit of each one by comparison with the other. A survival of the strongest takes place in matters prevailing thus. In politics there will always be two opposing parties. One party stands as a challenge to the other, ever ready to step in and control the reins of government at the slightest political indiscretion. A survival of the strongest in politics may be slow in coming about, so insidiously does corruption develop in the ranks of the incumbent party, but just as soon as the unbecoming conduct and misdemeanor can no longer be tolerated by the public, then the opposing party comes into power, prevailing for a cycle when it, sooner or later, meets a similar fate for a like cause. There is but one true religion; all forms, creeds, cults and denominations come through a misunderstanding or misinterpretation of the Scriptures. If our comprehension of the Scriptures was uniformly the same, there would be but one form of worship. We do not see and understand alike, hence the many churches of different faith. The opposite of Christianity is infidelity. The former is accentuated by the existence of the latter, and seemingly essential to emphasize that which results in the most good to the greatest number, as there are but few educated infidels compared with the multitude of intelligent believers in a Supreme Being.

Universal harmony is the key to professional progression, happiness and congeniality. Nature beautified the world by harmonizing sound, size, shape, color and conditions, using the different contrasts of each to intensify the elegance or inelegance of the other as the case may be. The most favored of all the essential attributes of Nature are color and sound. Varied tints and hues of most exquisite taste are to be found in the beautiful flowers of the land, and by harmonizing the colors we are able to satisfy the mind, through the eye, with pleasing pictures

and magnificent paintings by the great artists of the world. Without color we would be unable to see anything; we would have no use for eyes. Strange as it may seem, it is nevertheless true that if everything in existence was of the same color and same texture, we could not distinguish objects about us. If you were to fly a kite high in the air of the same blue as that of the sky you could not see it. If you draw a line across a blackboard with a piece of carbon of the same blackness as that of the board, you would be unable to see it, but if you use a piece of white chalk instead, the contrast is plainly visible. We must have a background of something different to bring out the object sought. So the regular system of medicine is unconsciously using the various fads and isms of all other systems as a background to accentuate its own prevailing steadfastness. We are a shining light in the midst of darkness, a solar system, if you please, with all other lesser planets revolving about us and we will ever maintain matters in this fashion so long as God and man combine forces in promoting and upholding the one science and the one system of medicine. We have accepted the wide and rational means of combating human ills; all others are mere substitutes for the real and cannot hope to do more than plunder our premises or be contented with the slag and left-over residue from the regular medical mills. There should be but one system of medicine founded on scientific principles, for all the good found in any creed or cult, possessing any virtue whatever, rightly belong to the one system—the regular system of medicine. Our field is unlimited and unrestrained. The old, tried and true assemblage of medicine has more and greater discoveries to its credit than all other systems combined. It has been the greatest boon to suffering humanity and in promoting and maintaining public health. We are not a selfish clan of malefactors or an aggrandizing aggregate of benefactors running off to one side as soon as we discover something new and useful in the treatment of diseases, starting up a new cult that we may gain fame and fortune, but we believe in giving everything found in the field to the profession and to the world at large free of charge. I do not think much of a man who holds the means of saving life or even prolonging it for a ransom, whether he be in the profession or out of it. We should not be human ghouls preying on the sick and unfortunate, but a body of scientific, philanthropic men striving to uphold the dignity of the profession first, last and at all times.

Public opinion should demand of every educated physician a knowledge of all the resources of the healing art, and a readiness to employ any and all means required to save life. If such a requisition is made by an enlightened public,

the medical profession will soon lose its factious and partisan character, and at the same time become vastly successful in the thorough cure of diseases. No direct measure has ever been taken to consolidate the different medical parties, but I sincerely believe, owing to the numerous creeds in medicine, that a national board should be established to bring about liberality in legitimate and scientific medicine, concentrating all worthy methods of the cure of disease into one.

There would be much more rapid progress of medical science in the attainment of accuracy were it not for the fact that so much party spirit has been excited among the votaries of different doctrines. A selfish and combative spirit in the profession not only separates practitioners of different opinions and produces continual discord in society, but so perverts the intellectual faculties of those who indulge in such controversies as to disqualify them in perceiving the harmonies of truth.

A physician is often led to affirm that a doctrine or plan of practice, slightly different from that which he adopts, is uncompromizingly antagonistic, and that if one is true, the other is necessarily false, when, in reality, both may be essentially true, and each, when rightly understood, perfectly compatible one with the other. There may always be an opposite to the therapeutic form of healing, but this is in keeping with all other natural events of an investigative age and should not deter us, as we cannot hope fully to eradicate public superstition, the very agar agar for germinating false isms. There are some forms of healing, however, quite beneath our notice and are not to be considered in these citations. For any method of healing that does not tend toward perfection should not be recognized by the public or profession. What think ye of trying to massage or rub the life out of typhoid bacilli, when intestinal perforation is liable to occur from intensified pent-up gas in the bowel from the most gentle manipulation? Or what about osteopathizing an appendicular abscess? What think ye also of antidoting rabies, snake venom and all chemical poisons that may have been taken through mistake or for suicidal purposes, by Christian Science or any other suggestive treatment? It is an insulting shame that we tolerate such infamous bosh.

The second chief attribute of nature is sound, which I shall merely touch on in passing. Sound is a natural response to material things directed by physical laws. By sound we are capable of hearing and understanding the great lessons and problems of life. By harmonizing sound musicians are capable of producing sweet strains that sooth the soul and sing the restless world to sleep. All sound is a musical tone touching on one key or another. The little bee

as it goes out in early morn in search of honey-laden flowers sings its sweet song in the key of A. The gnat sings its strain in the key of high C. The mosquito warbles its nocturnal melody as it flies from the miasmatic region to its human victim, in the key of E. The bumblebee hums about the hollyhock with his big bass voice in the key of F. The mammoth whistle of the packing house, though not a pleasing tone, bellows out in a double bass occupying its allotted position on the musical staff. Everywhere in the universe music is to be heard. There is music in the roaring of the sea. There is music in the cataract as it leaps headlong over the precipice. There is music in the laughing brook as it winds its way through the tortuous valley on its hurried journey to its own ocean home. There is music in the rustle of the corn tassel. There is music in the swishing of the grass. There is music in the forest, for every pineneedle holds itself out as so many reeds to be played on by the rushing winds. So on and on everywhere on land and sea Nature's orchestra plays, never ceasing, never tiring. The music may be sweet or it may be sad, owing to the harmony or discord displayed.

As we learn our lines in life's great drama we are assigned a rôle according to our talents and our proficiency. We are thus striving to gain a more favorable position in the spotlight of the world that we may play to the best advantage.

It should be the ambition of every individual, professional or otherwise, to fashion for a higher standard in science, in literature, in social and moral attainments. We are permitted by such indulgence to soar to heights untold and to drink the nectar of the gods of wisdom with the potentates of future ages.

It is not so much what we know as what we impart to others that enlightens the world and propels the masterwheel of progress. Ideas may be latent in every intelligent mind, only waiting for a mere hint of the truth to arouse mental lethargy, setting free powerful opinions that may startle the world with new thoughts of scientific magnitude. Every physician here, whether he be isolated in the jungles of the Ozarks or located in the great metropolis of the state, is capable of teaching his fellow practitioner something of interest gained by personal experience. The world-famed medical men of to-day were once unheard of, but constant perseverance crowned their efforts with happy success. Ideas promulgated on any topic may be identical with many that have never been uttered, yet were generated and matured but lie dormant in the mind unconsciously, just as the forest soil seems to be full of seed ready to spring up, only waiting for the woods to be cut away; so minds of men seem to be full

of ideas which blossom when old superstitions and old fancies are cut from around them by the ax of knowledge.

Wisdom, then, is obtained through consummation of our own natural resources. Nature placed in the acorn all the elements necessary to grow a mighty oak, so in every normal human brain is contained the attributes of all the great geniuses of the world.

Natural capabilities without culture are like the rich prairie unbroken. The mind requires tillage equally with the earth. God has endowed us with sufficient talents to meet the exigencies of life and it remains with us to make the best of them possible. The seed-sowing time of life is in vigorous youth and should not be neglected if we expect to harvest a full crop in ripe old age. The uncultured mind is like a diamond in the rough, it may be thrown about or trampled under foot as worthless, but its hidden luster gleams forth with sparkling beauty when it has been dressed and sufficiently polished. The human mind takes on a better finish and more readily at that, when the brain is young and yielding; therefore, if one wishes to follow a profession he should begin early in life. The things learned while young are never forgotten. The lessons learned in college by the oldest man present are as fresh in his mind as the things of yesterday, but the events of a few years ago are playing hide and seek with his memory. Senile subjects can converse about happenings of their childhood with much accuracy but cannot remember the simplest things of yesterday or even of to-day. So the man who began the study and the practice of medicine in his youthful manhood will retain his ability as a successful practitioner longer than the man who started in the profession late in life.

It is much a mystery to the modern educated man in the profession how some physicians whom they know, or have known, have succeeded so well in the field when their preliminary letters were so very limited. The secret is this: The brain of such individuals were in the beginning of virgin soil, a wild waste as it were, void of germinating thought. They learned medicine at first hand exclusively just as the child is taught nowadays to read before it learns its letters. His medical knowledge came first as an original mental product and all accessories, though few they may be, came as an afterthought by constant contact with the professional world.

The old superstitious idea that some men are natural-born doctors and were called to practice as some men are called to preach, is fully explained in the foregoing paragraph. But let us not lose sight of the fact that some of the best educated men in medicine are to be found in the rural districts with their lamps hidden under a bushel. There was a time when the

city physician might boast of his superiority over his country brother, but that time is no more. Many of our most intelligent young men who graduated with high honors are located at the country crossroad, and they keep abreast of the times by reading current medical literature. The typical country doctor of long ago is almost extinct. They were a brave, conscientious lot of men, always dealing fair with their clientele. A friend of mine was once in a little country drugstore not many miles from here conducted by one of those old-time fellows who used the drugstore for his waiting, consulting and operating room. While there a man called in and described his wife's ailing condition, whereupon the old doctor disappeared behind a high board wall answering the purpose of a prescription case. In due time he returned with a small bottle of medicine in one hand and a box of pills in the other and with assurance remarked: "Why, you give her ten draps of this medicine three times a day and one of those little pills at bedtime, and why if she arnt better by tamarow why, that arnt what is the matter with her." Such acknowledgment of a probable mistaken diagnosis would not be forthcoming at this age of enlightenment. But these men were loved and respected for their truthfulness and frankness by all who knew them.

In conclusion let me ask the young physicians to throw off the mantle of timidity early in the cause and wear the badge of loyalty of their chosen profession conspicuously displayed at all times in order that the public may know they are students of Nature and a God-sent benefactor of the human race. If by research and personal experience you discover something of unusual merit for the ills of mankind give it freely and willingly to the profession, so that suffering humanity may subsequently profit thereby. Any physician who obtains a patent on a remedy does so for selfish purposes, commercializing the profession, and has not the public interest or welfare of the sick truly at heart. But you should never storm the profession with a loud, misleading ballahoo that cannot meet the test of scientific investigation.

To be loyal to the profession you must face dangers and difficulties on all sides. You must be willing to lay down your own life, if need be, for the sake of others. The brave men of our ranks who have died in martyrdom characterized a true type of manhood composing one of the greatest professions under the sun, and to maintain that high standing which they attained you must be willing to acquit yourselves in like manner.

A parting word to the seniors: Let us be mindful of the following fact, that the setting sun of our heyday in medicine, while it is slowly but inevitably slipping out of sight beyond the western slope of life, will again rise

in the east to glorify another day for those who come after us. So let us leave footprints in the sands of science reminding our followers that they are not the aborigines in the medical world, that a people preceded them leaving well-beaten paths up-to-date to all the latest and best discoveries in medicine and surgery as well as other signs of having been an enlightened race on all current topics of the times. And may it be well said of us when we are gone: They fought a good fight, winning human victory over death and the grave in many a battle. And as a last reward, may the angel of love linger long and late over your ashes when this life is no more.

PRACTICAL POINTS FOR THE GENERAL
PRACTITIONER COMPELLED TO
DO EYE-WORK*

J. W. CHARLES, M.D.
ST. LOUIS

Every practitioner should learn to turn his own eyelids and should teach all of his lid cases to do so. While the eye-cup is perhaps better than nothing, the edge of the lid is shaped something like a rubber window-washer and wipes out most of the solution. If the lid is everted, the conjunctiva may then be treated without so much discomfort when an astringent is used, and the physician will have the assurance that the patient is doing his share successfully at home, a most essential part of country eye-work. To turn your own upper eyelids you must be mindful of several facts: the eye is longest through the pupil, therefore you must look down. But to look down and into the mirror at the same time, you must throw your head back as far as possible and keep your other eye open on what you are doing. Draw the lid down on the cheek. Press firmly behind the tarsus and you will then very rapidly wrap the lid over the point of the dropper. The lid is everted as much by pressure as by traction. After the lid is turned, the cornea should be protected from the drops by sliding the upper lid down behind the lower lid. The whole conjunctival sac will thus be treated without bringing the fluid directly in contact with the very superficial nerves of the cornea.

In searching for foreign bodies, after careful inspection of the cornea in all positions and of the lower lid and retrotarsal fold, evert the upper lid, then comes the upper retrotarsal fold. Formerly, when nothing could be found in the conjunctiva of the upper and lower lids, the oculist attempted to wipe out invisible foreign bodies by passing a probe behind the tarsus.

After this was repeated several times, the patient always knew that instead of a mote he had a beam in his eye. First turn the upper lid; then, putting it on the stretch by holding it firmly against the brow, insist that the patient continue to look down while you press the globe straight back into the orbit through the lower lid. The upper retrotarsal fold rolls down into view. This is also important when the eyes feel sandy and you cannot find any trouble on the palpebral conjunctiva. This is the region of preference for commencing trachoma, and should be thoroughly inspected. After a foreign body has been removed from the cornea, it is well to warn the patient that the after-irritation will make him feel as if the cinder were still there, like the sensation left after the removal of a splinter from the finger. When the globe has been opened by injury or by operation, do not press on the edge of the lid when you wish to open the eye for inspection. Place the ball of the thumb under the brow and by firm pressure force the brow, orbicularis and the lid upward. In all manipulations, do not approach the eye directly—it is too startling and your patient becomes unmanageable and winks every time you attempt to do anything. Come down from above, sliding the fingers over the lids until the patient is quiet. Then proceed firmly. The most disagreeable lid-handling is done by the man who attempts to work too gently and therefore constantly lets go and fumbles.

Do not prescribe any of the silver salts for home use, not even argyrol. Staining of the conjunctiva, and especially over the white sclera, is a real tragedy. A fine-looking law student recently presented himself disfigured for life because a medical student had believed in the harmlessness of argyrol.

When a patient comes with a red eye and you know that he has a conjunctivitis by the velvety appearance, the discharge and the brilliant redness and mobility of the vessels over the globe, do not take it for granted that this is all. Too many cases of iritis and glaucoma have been treated for a cold because there was added the picture of a conjunctivitis with secretion. Do not use atropin in cases of doubt, because it is our strongest mydriatic and no strength of pilocarpin or eserine can overcome it before the eye is lost if you happen to have a beginning glaucoma. When you have a deep, violet, circumcorneal injection, with the pupils still of equal size and the iris not yet hazy or discolored by swelling, try the "pupillary reaction to dark." If the pupil in the normal eye dilates and the one in the red eye remains contracted, you have probably at least a hyperemic iris and you may then use a 2 per cent. solution of cocaine. Leave the patient in the dark fifteen or thirty minutes and repeat if the pupil is

* Read before the Eleventh District Medical Society, Chillicothe, Mo., March 19, 1914.

still contracted. In an hour the pupil should have begun to dilate, and if it is irregular from adhesions to the lens capsule you will know that you have to deal with an iritis; even then the intra-ocular pressure should be taken constantly while atropia is being used. You may recognize glaucoma by the hardness, large and usually oval pupil, and shallow anterior chamber. Naturally your medical eye-man (and every town the size of this should support a well-trained ophthalmologist) can recognize and treat such cases more readily, but you yourselves would do better than the optician selling murine when his glasses do not relieve the discomfort. While they say that they would send all such cases to the medical man, that usually happens only after they have sold the glasses and given the patient a false sense of security while vision is being lost. How can they receive compensation for their free examination if glasses are not sold?

Do not forget that so-called auto-intoxication, high blood-pressure and nasal inflammation cause much of the resistance to treatment of many cases of conjunctivitis as well as many cases of discomfort in reading. By no means can all cases of nervousness, nausea, headaches, rheumatism, appendicitis or neurasthenia be cured by glasses (as is so often advertised by the enterprising jeweler), even though these discomforts often appear after or are aggravated by reading. Often general disorders prevent relaxation of accommodation so that the patient, though really needing glasses, cannot be given full correction. The spasm of the ciliary muscle (of accommodation) cannot always be remedied by training with the half correction, and therefore the eye cannot obtain complete rest. The medical man is therefore compelled to paralyze the ciliary muscle with a cycloplegic in order to know the goal of full correction with glasses which must finally be reached. The question must here be answered: Is this mechanics, simple optics or a medical problem? Who but the medical man should be the judge? In spite of the assertions of the optometrist, I have never seen a case of permanent disability resulting from the use of atropin in a normal eye. While it is true that the majority of cases can be made comfortable without a cycloplegic, let your trained, medical eye man be the judge rather than your jeweler. The text-books sound a warning against the indiscriminate use of cycloplegics and very properly; but the optical journals, the organs of the optometrists, are full of text-book misquotations in a layman's or business man's campaign to educate the public against the medical man. They maintain that they are not practicing medicine, but they certainly are preaching against the judgment of medical men—their own judgment is better for the public. If, as is their proud boast, their

thirty-one states with optometry laws had been as firm as this state has been in the prevention of licensing business men to practice medicine; if our opticians had not been encouraged by the indifferent attitude or the direct support of medical men, our jewelers and opticians would never have had the effrontery to advertise against "the use of poisons in the eye" by the oculist. Would the midwives have obtained a license from the state by decrying the methods of obstetricians—the use of chloroform, the forceps, ergot? I venture to assert that even now should they begin a campaign against your methods in practice, you would revoke their privileges with such rapidity that the lesson would not be forgotten.

This brings us to the subject of optometry—an entering wedge into medicine in which every practitioner should be interested. These advocates of a law to license spectacle-fitters untrained in medicine claim that they have no intention of practicing medicine; yet in some of the states in which their laws have been passed they are charging a fee for examination, and in their conventions they have lectures by osteopaths on iritis, etc., mixed in with articles on how to make the customer buy the most expensive glasses. Their representative journals exhibit a wonderful combination of commercial science, or salesmanship, with pseudo-science. Since these laws have been passed, many optometrists are now studying chiropractic, osteopathy and so-called neurology so that they may be better fitted for the practice of their "profession." Their schools give courses in anatomy and physiology of the eye and claim to teach men about tissues who cannot possibly know anything about cell-life.

Suppose the schoolteachers of the country wished to build a large portion of our bridges "for the benefit of the traveling public" and asked our legislators for a law prohibiting all but regular engineers from building bridges except those persons who could pass an examination in mental arithmetic. You would ask "What has mental arithmetic to do with building bridges?" They answer that all engineers should know arithmetic, therefore all who know arithmetic should be allowed to build bridges. Optics is just as elementary to the oculist for practical work as arithmetic is to the engineer. Certainly he should have had a thorough course in optics, but I would just as soon travel over a school-teacher's bridge as have a jeweler educated in elementary optics pass judgment on my eyes. He may solve problems in elementary optics more readily than the man who could do so ten years ago and who has since devoted himself to eyes and individuals medically and optically, but you do not consult him about optics; you consult him about the health of a very important part of your body, its relation

to the health of the rest of your body and the preservation of that health, not only with glasses, but with all means at the disposal of the best trained mind within your reach. The man with the mental training of a jeweler and the mental attitude of a salesman is not as capable of acquiring the optical, psychological, mechanical, medical knowledge necessary for the fitting of glasses as a senior medical student after three years in all sorts of mental training. He cannot be taught in twenty years of optics the professional attitude toward patients instead of the salesman's attitude toward customers.

I would answer their most insistent argument somewhat in this way: They say that, after all, the cases of brain tumor, Bright's disease, high blood-pressure, glaucoma, etc., are rare compared with the great number of people made happy by the glasses of the licensed optician. But this is also true of the work of the *quack* doctor and the *faker* optometrist.

The people who believe that they can take chances with their eyes and whom the optometrists especially pride themselves on handling successfully are the so-called normal presbyopes, people who "haven't anything the matter except that the eyes are changing"—*the very ones who should begin to consult you in order to learn just how old they (as well as their vision) are. No presbyope is normal*, because he is beginning to have old tissues. There is such a thing as premature presbyopia and there is such a thing as a late failure of the eyes for near work. No one except the medical man can say just how old a man really is and it is a difficult task even for him to judge how much the arteries are degenerated, the kidneys diseased, the vision lowered, etc., and therefore what strength the glasses should be at that age, or whether glasses will be an injury or a benefit, or whether to follow certain diets or modes of living in order to avoid the advance of eye and general disease already begun.

Do not encourage the optician to become a half-medical man by sending him your presbyopes or your children, and do not set your patients a bad example of indifference to consequences by going yourselves. If physicians would educate their patients to go for their glasses to a well-trained eye man in their community instead of to the optician, the latter would not put on nearly so many professional airs nor would they act as if they were your equals in knowledge. I have known towns where professional gentlemen, with minds trained by hard work in a several years' medical course, fraternize with and call "doctor" a six-weeks' optical-course jeweler because he hung a Doc. Oph. "diploma" in his office.

The average short-sighted practitioner is rather apt to be bored when he is approached with an argument which does not seem to bear

directly on things medical. He would prefer to let well enough alone concerning those disputes which arise between the politicians and the people, or between the demagogues and the righteous, or even, too often, between those interested in projects against the public health and those impelled to fight them, but no physician of this decade can afford to allow any more medical territory to be annexed by outlaws; if much more encroachment occurs, there are those present who will live to see the profession of medicine reduced to a pitiful trade in the eyes of the layman, and your successors will be midwives, no longer under our medical board of health; osteopaths, treating everything because you did not stop them early in their nefarious career; chiropractics, who, like the osteopaths, will find some way to practice medicine; mental healers and Christian Science teachers with their absent treatment, and finally, but not least, the optometrists, who will endeavor to combine "ophthalmology" with the other "sciences" *after you have permitted them to be legitimized* (in California they started a movement to be allowed to do nose and throat work). You may believe that it is not your business to protect the public against their own medical ignorance, but if you are not constantly vigilant against the forces of evil in your community your reason for existence will cease to be, and your successors will soon be on the defensive in behalf of that existence. All these activities are well covered by our medical practice act. It is time to include optometry in the enforcement of our medical laws. If you do not do so, the next generation of the public will have plenty of jeweler-optician-optometrists and few oculists because the educated physician will not care to select a specialty which involves competition with tradesmen, and I do not believe that the public will be benefited by the change.

Humboldt Building.

MEDICAL LIBRARIES*

ROBERT E. SCHLUETER, M.D.
ST. LOUIS

When discussing the medical libraries located elsewhere than in St. Louis it is probably best to begin with those of foreign countries and then take up the ones which are found on this continent. General conditions abroad differ from ours in some respects; in others they are singularly similar. For instance, we have often heard of the large sums of money expended by our federal government for the conservation of the health of animals, while that of human

* Read before the St. Louis Medical Society, March 7, 1914.

beings seems to be a secondary matter. There appears to be a like state of affairs in France, where the library of the Faculty of Medicine of Paris receives an annual allowance of 600 francs (about \$120) from the government, while the library of the National Veterinary School at Toulouse receives a yearly contribution of 1,800 francs (about \$360) from the same source.

All over Germany, France, Austria and in some of the other countries there are old libraries in castles and monasteries where many old medical works are stored away. These are of special interest from an historical standpoint, but for the general run of work only the more recent files are needed. Still, the former offer an immense field for historical research that will not be exhausted for a long time to come. Furthermore, the large general libraries in London, Paris, Berlin and Vienna contain great numbers of medical works, and are a substantial supplement to the purely medical collections.

The British Museum owes its origin to the will of Sir Hans Sloane, an eminent physician and naturalist, who died in 1753. Its library now has more than 2,000,000 printed volumes. Among these there must be many medical books, for a copy of every book, pamphlet, newspaper, etc., published anywhere in the British territory must be conveyed free of charge to the British Museum.

The principal medical libraries in London are those of the following organizations: Royal Society of Medicine, 80,000 volumes; Royal College of Surgeons, 60,000 volumes; British Medical Association, 40,000 volumes; Royal College of Physicians, 26,000 volumes; Medical Society of London, 25,000 volumes. Then there are eight or nine more, mostly in the medical schools. With the foregoing they have altogether about 280,000 volumes.

There are several other large medical libraries in Great Britain. The library of the Royal College of Physicians of Edinburgh has over 100,000 volumes, while that of the Royal College of Surgeons of Edinburgh has only about 16,000 volumes. The library of the Royal Medical Society of Edinburgh contains about 30,000 books. At Glasgow, the library of the Royal Faculty of Physicians and Surgeons has about 51,000 volumes, and at Manchester the conjoint library of the Manchester Medical Society and the Faculty of the University has 41,200 volumes. The Bristol Medical Library has 21,000 volumes, and the library of the Liverpool Medical Institution about 14,000. At Dublin the library of the Royal College of Physicians of Ireland has 15,500, and that of the Royal College of Surgeons in Ireland about 33,000.

On the continent there are so many that we must again limit ourselves to those in the great

medical centers, adding only a few of the more important libraries in the cities of moderate size.

In Berlin the special medical libraries have altogether about 225,000 volumes. Of these that of the Imperial Department of Public Health is the largest with 70,500. Next comes that of the Kaiser Wilhelm Academy with 67,000. The Berlin Medical Society and the German Surgical Society each have about 40,000. All the others in the Kaiser's capital are unimportant.

Paris leads the world in many things, and the largest medical library is found in that city in the Faculty of Medicine, 250,000 volumes are contained in that collection. The Academy of Medicine has a library of about 60,000 and the library of l'Assistance Publique has almost 35,000, many of which are works on hospitals and their history. In the Pasteur Institute there are 20,000 volumes.

At Vienna the Medical Society (Verein der Aerzte in Wien) has a library of about 46,000 volumes; while the older works, many of which are very rare and some of them the only copies extant, are almost all stored in the immense Hof-Bibliothek.

The Imperial Military Academy at St. Petersburg has accumulated more than 180,000 volumes, and of the 121 local medical societies in Russia, 108 have libraries. All of them elect a librarian, even though they may have no books.

The Royal Academy of Medicine at Brussels has a splendid library of about 100,000 volumes. The Senckenberg Library at Frankfurt a.M., 87,256 volumes (1912). The Munich Medical Society has a library of more than 66,000. The library of the Florence (Italy) Medical School had over 38,000 volumes in 1911. At Calcutta, India, the Medical College of Bengal has a library of more than 50,000 volumes.

Then there are the two collections at Stockholm. That of the Caroline Institute has 41,000 and the library of the Association of Swedish Physicians over 30,000.

Now, when we look at the medical libraries of our own country we see figures which compare very favorably with those of similar institutions abroad. The books are just as good for all practical purposes, though the number of older works is considerably less. The works of the old masters were printed in Europe, and, when a book is once placed on the shelf of any but a private library, it is never again sold or given away.

The earliest medical library in this country was that of the Pennsylvania Hospital. Benjamin Franklin helped found the Pennsylvania Hospital—the first hospital in America—with Dr. Thomas Bond, who first conceived the idea in 1751. Franklin also founded the College of

Philadelphia, in which systematic lectures on medicine were begun in 1766. Thus it was the first medical school in the United States. In 1791 it became the University of Pennsylvania.

In the minutes of the board of managers of the Pennsylvania Hospital, under date of July 27, 1762, is the following: "William Logan, lately returned from London, attended the board with a book entitled 'An Experimental History of the *Materia Medica* by Wm. Lewis, F.R.S.," lately published in London, being a present to this hospital by Doc'r John Fothergill for the benefit of the young students in physic who may attend under the direction of the physicians, which is kindly accepted by the managers as an additional mark of the doctor's benevolent regard to the institution, and Wm. Logan is requested to acquaint him with our grateful acceptance thereof." This is the first record relative to the first medical library in the United States.

In May, 1763, the physicians of the same hospital addressed the following proposal to the managers: "As the custom of most of the hospitals in Great Britain has given such gratuities from the students who attend the wards of the hospital to the physicians attending them, we think it properly belongs to us to appropriate the money arising from thence. And we propose to apply it to the founding of a medical library in the hospital which, we judge, will tend greatly to the advantage of the pupils and the honor of the institution." This proposal was acceded to by the managers.

In 1790 the first printed catalogue of the books in this library was published. Another was published in 1806. In 1889 it contained about 13,000 volumes, and now it has only a little more than 15,000.

The medical library at the New York Hospital was founded in 1776, and that of the College of Physicians of Philadelphia in 1788. These three were all that were established in the eighteenth century. During the nineteenth century they gradually increased in numbers, especially during its last two decades, so that in 1898 there were about 120 medical libraries in the United States. Since then the number has grown to 152. There are even more than that, but I have found no record of them.

Some of this increased activity is due to the American Medical Library Association which was founded in 1898, and which has done much to stimulate interest in medical libraries. This association has a system of exchange by which the duplicates in one library can be placed in the other collections which are in need of them. It has also contributed in a great measure to improvements in the methods of conducting libraries.

Of the 152 medical libraries mentioned, 55 are the libraries of medical schools, 49 are the

property of state or local medical organizations, 23 are public, semipublic, state or governmental institutions, wholly or in part medical, 14 are more or less private corporations, and 11 are connected with hospitals, dispensaries, laboratories or research institutions.

The library in the office of the surgeon-general of the U. S. Army at Washington, D. C., is by far the largest in America and for many reasons the most important. On June 30, 1913, it contained 182,532 bound volumes, 92,762 medical theses and 229,887 pamphlets, making in all 322,649. The first series of the index catalogue of this immense collection comprised sixteen large volumes; and of the second series, which is not yet completed, there have been seventeen volumes issued already. The librarian of any medical library can procure for the perusal of a member any book from the Surgeon-General's Library by paying the postage or express charges.

Of the other libraries, that of the Philadelphia College of Physicians leads with 91,673 volumes, while that of the New York Academy of Medicine is a close second with about 90,000. The Boston Medical Library, founded Dec. 21, 1874, by six gentlemen who met at the house of Henry Ingersoll Bowditch, has 72,000. The library of the Brooklyn Medical Society has about 65,000 volumes; the Rhode Island Medical Society about 25,000, and the Medical and Chirurgical Faculty of Maryland 25,000 volumes. The medical department of the John Crerar Library at Chicago numbers 56,000 volumes, the Lane Medical Library of the Leland Stanford University 37,000, and so we might go on to enumerate them until we found that our own library is the twenty-third in the list according to the number of volumes.

There are eight cities in North America in which may be found more books in their several medical libraries than our home city can boast of. Washington, D. C., leads with over 200,000, then comes Philadelphia with 148,000, New York with 120,000, Boston with 109,000 and Chicago with about 100,000. Then we have Brooklyn with 65,000, Baltimore with 57,000 and San Francisco with 49,000. After all these St. Louis with about 38,500.

It has been said that there is no need of having more than one medical library in any one city. This may be true when all the different medical interests of that city are concentrated in that library, but even then there could be found some excuse for separate collections of special medical works. Unless enough funds are placed at the disposal of the library management so that everything may be purchased as fast as it is published, there will soon be somebody who will have pressing need of a book or journal which is omitted for some reason or other.

Medical libraries have seldom prospered when contained in general libraries unless conducted as separate departments. Furthermore, a constant interest must be maintained. If the library is not steadily increased, with an occasional large addition, it is soon of little use to anyone.

In looking into the history of other medical libraries, we find another material factor which promotes their welfare—that is a building owned by the library or the organization to which the library belongs.

Often it requires a good many years to collect the money for such a building. Brooklyn started to collect a fund in 1881 and realized it in 1900. The building cost about \$100,000 and is fireproof. Boston's Medical Library building cost \$140,000. The Rhode Island Medical Society's library is housed in a fireproof building costing over \$50,000.

When Sir William Osler left Baltimore for Oxford, the Osler testimonial took the form of a building for the library of the Medical and Chirurgical Faculty of Maryland. It is a pleasure to look at the subscription list of this fund and see with what a liberal hand the colleagues of Dr. Osler contributed. Another example of the liberality of the medical men of the city of Baltimore is the John M. T. Finney fund for the advancement of surgery. When Dr. Finney declined the presidency of Princeton University to remain in Baltimore, \$10,000 was raised as a testimonial to him, the income of which is to be used to purchase books and to procure lecturers.

Some so-called centers of medical education have practically no libraries, and medical libraries have not developed in response to certain peculiarly favorable conditions confined to large cities. Most of them have been built up by a few individuals. Often they are the result of the work or generosity of a single person. The beautiful little building which houses the 4,000 volumes of the Barlow Medical Library at Los Angeles is one example. In the year 1900 Dr. W. W. Kern of Philadelphia raised a \$50,000 endowment fund for the library of Jefferson Medical College. Others have agreed to raise it to \$100,000 but I do not think they have yet attained that figure.

An endowment fund is certainly one of the most potent factors in the perpetuation and steady growth of a library. Though such a fund be comparatively small, the regularity of the income can be relied on, and so it augments the possibilities of expansion just so much above the other sources of revenue.

We could prolong this subject almost to an indefinite degree. There is an abundance of material and there is so much in the records and history of this kind of institution that

might be emulated. Each one of them has its own peculiar problems and also those common to many of them. We must have medical libraries. Every smaller locality should have a practical library for the use of the busy practitioner. Every larger city should have a comprehensive collection which can serve the authors and teachers as well as the practitioners. The state and local government ought to contribute to the support of its medical libraries, but the members of the profession should and must bear the largest part of the expense.

Metropolitan Building.

HISTORY OF THE MISSOURI MEDICAL COLLEGE, FROM 1840 TO 1861

Early history of the Missouri Medical College, from the manuscript of Dr. A. B. Barbee. Presented by W. A. Hardaway.

The Medical Department of Kemper College was organized in 1840 by Dr. Joseph N. McDowell, who was aided by Dr. John S. Moore of Tennessee, having matured the plan for the institution during the winter of 1839 and 1840. The two physicians procured a charter for the department of Kemper College—afterward the Poor House Farm—and under its provisions organized.

The first session opened in November, 1840, with a class of thirty-seven matriculates, and was held in a building at the corner of Ninth and Cerre Streets, subsequently the Wainwright malthouse. The institution was successful from the first.

In 1846 the college became the Medical Department of the State University at Columbia, Mo., Kemper College having ceased to exist.

In 1857 a new charter was procured by an act of the legislature, under the name of the Missouri Medical College, which name it now bears.

After the commencement of the war, the military authorities took possession of the building and converted it into a military prison, known as Gratiot Street Prison, and it was used as such till the close of the war.

The faculty, having been dispossessed of the college building, were then homeless and left in a disorganized state, but, true and loyal to the good old school, they reorganized with but a small remnant of the faculty and procured a temporary home on Fifth Street between Chestnut and Pine Streets, where the usual course of lectures were given to a small class.

In 1865, Dr. J. N. McDowell returned to St. Louis and reorganized the faculty, and continued at the head of the school till his death, which occurred in 1868. The same year Dr. Paul Eve, then professor of surgery in the Nashville (Tenn.) Medical School, was called to fill Dr. McDowell's place. He delivered but one or

two courses of lectures, becoming dissatisfied, resigned and returned to Nashville, Tenn.

The first faculty of 1840 and 1841 consisted of the following gentlemen: Drs. Joseph N. McDowell, John S. Moore, Prout, J. W. Hall, R. F. Barret and John DeWolfe, professor of chemistry, and a resident of Vermont, but who was always present at every session as long as he continued a member of the faculty.

The session of 1841 and 1842 had the same faculty except Drs. Prout and Hall, who resigned and assisted in the organization of the St. Louis Medical School, then the Medical Department of the St. Louis University. Their places were filled by the election of Drs. Thomas Barbour of Virginia and William Carr Lane of St. Louis. Some changes were made in the faculty in 1842 and '43. Drs. Barret and William Carr Lane resigned, and Drs. S. Gratz Moses and J. B. Johnson were elected to fill their chairs. Changes occurred from time to time in the faculty.

The chair of obstetrics and diseases of women and children was occupied at different times by Dr. E. S. Frazer, one of the first graduates of the school, Dr. Kavanaugh, also by Dr. Spence, a graduate of the Missouri Medical School and one of the brainiest men the school ever graduated. He succeeded Dr. J. B. Johnson to the chair of physiology in 1855, Dr. Johnson having resigned to accept a position in the St. Louis Medical School.

Dr. John Barnes was elected a member of the faculty in 1849 and filled his chair very acceptably. He was an educated man and a fluent lecturer, and at one time was connected with the Pennsylvania University.

I very much regret that I cannot present a more complete history of the Missouri Medical School and the names of all who have been connected with the school as members of the faculty. Much of the data on which I depended has been misplaced, and the time has been too long for me to draw on my memory for facts that would enable me to furnish more than I have submitted. Suffice it to say that I have done the best I could under the circumstances.

A SHORT SKETCH OF SOME OF THE OLDEST MEMBERS OF THE FACULTY

DR. JOSEPH NASH McDOWELL: In speaking of Professor McDowell, I ask permission of embodying the views expressed of him by a certain writer: "Dr. McDowell, one of the best-known physicians and surgeons who ever practiced in St. Louis, was born in 1805 and came to St. Louis in the spring of 1840 from Cincinnati, where he had been associated in the Cincinnati Medical College with Drs. Drake and Gross and other distinguished men. On coming here, he immediately set to work to organize a medical school. He was a fluent and eloquent

speaker and was possessed of great wit. His voice and manner were like those of John Randolph of Virginia. He was a natural orator and possessed a remarkable power of adapting himself to his audience, so that he could entertain any company or society into which he might be thrown. He had an inexhaustible fund of anecdotes. It is said of him that he had a story for every muscle, nerve, bone and vessel in the whole body, and that he used to enliven his lectures and stimulate the memory of the students by relating these stories, and so fixing the anatomical facts in their minds."

In erecting the stone octagon building, that served so many years for the purposes of a college, he caused a foundation to be laid in the center for a large column, which was to be extended to the peak of the roof, under which niches were to be prepared for the reception of copper vases, containing the bodies of himself and members of the faculty. I think the above is a stretch of the imagination purely.

DR. JOHN S. MOORE was born in Orange County, N. C., in 1807. He received a collegiate education at Princeton, Ky. He first attended one course of lectures at the Medical University in Ohio. He then practiced for five years at Mount Vernon and Carlisle, Ill. He started to Pittsburgh to complete his medical education but, meeting Dr. J. N. McDowell in Cincinnati, he was persuaded by him to enter the first class of the Cincinnati Medical College, at which he graduated in the spring of 1832. He then practiced in Pulaski, Tenn. He removed to St. Louis and took part in the organization of the Medical Department of Kemper College, with which institution, under various changes of name, he was identified up to the date of his death.

DR. WILLIAM CARR LANE, the first mayor of St. Louis, was born in Fayette County, Pa., Dec. 1, 1789. He graduated in the University of Pennsylvania. In April, 1816, he located in the city of St. Louis, where he resided to the day of his death, which occurred Jan. 6, 1863. He was chosen professor of obstetrics and diseases of women and children in the Medical Department of Kemper College in 1841. After the close of the course of 1842-43, he resigned his professorship and S. Gratz Moses succeeded him in the department of obstetrics.

DR. RICHARD F. BARRET was born near Greensburg, Green County, Ky., February, 1804, and was the private pupil of Dr. Daniel Drake of Cincinnati, Ohio, and professor in the Cincinnati Medical College. He graduated in the Cincinnati Medical College and spent some time in the hospitals of Philadelphia. In 1840 he was elected professor of physiology in the Medical Department of Kemper College, which position he filled until the close of the session of

1843, and then resigned on account of his large property interests requiring his constant attention. Dr. J. B. Johnson was then elected to the vacancy.

DR. THOMAS BARBOUR was a son of Philip C. Barbour, one of the judges of the Supreme Court of the United States. He was a finely educated man and a graduate of the University of Pennsylvania in 1830. In 1842, he was elected professor of materia medica and therapeutics in the Medical Department of Kemper College. In 1846 when the college became the Medical Department of the State University, he was elected to the chair of obstetrics and diseases of women and children, which he continued to occupy with distinguished ability till his death, which occurred June, 1849, having died of Asiatic cholera at his residence at the northeast corner of Ninth and Locust Streets, in the building now occupied by Dr. Wickersham as dental rooms.

DR. J. B. JOHNSON was chosen adjunct professor of physiology under Prof. Richard F. Barrett in 1842. After the resignation of Dr. Barrett in 1843 he was elected to that chair, which position he held until the close of the session of 1854, when he resigned, and was afterward elected to a professorship in the St. Louis Medical School.

DR. CHARLES A. POPE was elected adjunct professor of anatomy under Professor McDowell in 1842 and delivered one course of lectures. In the spring of 1843 he resigned and connected himself with the St. Louis Medical School.

DR. CHARLES E. STEVENS was born June 16, 1817. He attended the Medical Department of Kemper College as a student of medicine and graduated in the spring of 1842. In 1844 he was appointed demonstrator of anatomy in the Kemper School, which position he held seven years, when he took the same position in the St. Louis Medical School. In 1855 he was elected to the chair of general, special and surgical anatomy in the St. Louis Medical School.

DR. JOHN T. HODGEN was born January, 1826. He entered the Medical Department of the State University in his twentieth year and graduated in March, 1848. He was assistant resident physician of the St. Louis City Hospital from April, 1848, to June, 1849, and was demonstrator of anatomy in his Alma Mater from 1849 to 1853. The energy with which he devoted himself to his profession received him the chair of anatomy, which position he filled from 1854 to 1858. From 1858 to the close of the session of 1862 he filled both the chairs of anatomy and physiology. In 1862 the college building was taken possession of by the military authorities and converted into a military prison, and he then withdrew from the school and accepted a similar position in St. Louis Medical School.

THE ANNUAL EXERCISES. GRADUATES, ETC., OF
MEDICAL DEPARTMENT OF KEMPER COLLEGE,
STATE UNIVERSITY, AND MISSOURI
MEDICAL COLLEGE

1841

The first commencement of the Medical Department of Kemper College was held at the Baptist Church, Feb. 23, 1841. Rev. S. A. Crane, president of Kemper College, delivered the inaugural address, subject "Inculcating the Truths of Christianity in Order to Insure the Advancement of Science." When the address was concluded a poem, written by a young lady of the city, was read by C. C. Carrell, Esq. After the reading of the poem, the presentation of diplomas was made by the president. The ceremony was followed by an address delivered by Dr. J. N. McDowell. The list of graduates not published.

1842

The commencement exercises of the Medical Department of Kemper College were held at Concert Hall, Saturday evening, Feb. 26, 1842. After the delivery of the address by the president, diplomas were awarded to the following gentlemen: J. M. Perry, St. Louis; John Edgar, Iowa; A. H. Illinski, Illinois; Douglas Stevens, Missouri; John Morrison, Tennessee; J. S. Peacock, Virginia; Nathan Watson, St. Louis; J. D. Belt, St. Louis; E. Hildreth, St. Louis; Chas. W. Stevens, Illinois; Samuel Thompson, Illinois; Beriah Graham, Missouri; George Teyman, Missouri.—13. Honorary degree conferred on Dr. Israel McGready, Missouri.

1843

The graduating exercises of the Medical Department of Kemper College were held at Concert Hall, Feb. 25, 1843. Diplomas were presented by Pres. Rev. Hutchinson. List of graduates not published. The following are some on whom degrees were conferred: Drs. Wm. Pimm, Banks, Horton, Allen, Harrington, A. B. Barbee, Thompson, Thornton.

1844

The graduating exercises of the Medical Department of Kemper College were held on March 2, 1844. The degree of Doctor of Medicine was conferred on twenty-seven, and honorary degrees on two. No list of names of graduates published.

1845

No account of the graduating exercises of 1845 can be found.

1846

The graduating exercises of the Medical Department of the State University were held March 3, 1846, at the Fourth Street Methodist

Church, corner Fourth Street and Washington Avenue. A large and respectable audience was present. Dr. J. S. Moore, dean, gave a brief history of the institution, its former connection with Kemper College and the reasons which led to its attachment to the State University, of which it now forms a part, and its present and future prospect. Mr. Lathrop, president of the State University, delivered a highly interesting address on the subject of "Human Knowledge." The degree of M.D. was conferred on the following gentlemen: Benj. H. Pearson, G. Bickerton, Winston, S. H. Edwards, A. Frost Haynes, Hugh Ronalds, S. M. Carter, W. B. Adams, W. T. Keath, J. S. Arnold, Saml. G. Muaghs, N. A. Davis, J. W. Roher, Chas. E. Knapp, Saml. Buckner, S. Kirkpatrick, Albert Holmes, A. J. Griffith, Wm. C. Morrison, Edward Rackleff, S. L. Calloway, Alexander Ross, J. Dudley Tyler, C. S. Purket, Wm. West, T. M. Fyler, Alex. P. Dorris, J. T. Hughes, David O'Glasecock—29. Honorable degrees conferred on Dr. A. R. Knapp, Illinois. Valedictory by Prof. Thomas Barbour.

1847

The commencement exercises of the Medical Department of the State University were held March 2, 1847, at Centenary Methodist Church, Fifth and Pine Streets. President Lathrop delivered the address and Professor McDowell the valedictory. No published list of graduates.

1848

The Medical Department of the State University held its graduating exercises Feb. 29, 1848. Addresses were delivered by President Lathrop and Dr. J. S. Moore. Degrees were conferred on the following gentlemen: J. N. Arent, A. F. Barnes, C. F. Clayton, W. W. Cottle, J. S. Davis, J. S. Dewey, Marion Edmonson, J. S. Evans, S. F. Ferris, J. T. Fort, G. E. Frazer, W. H. Green, R. W. Hall, J. L. Hallam, G. O. Harrison, Theodore Hay, J. T. Hodgen, Wm. H. Hopson, P. K. Howe, T. J. Irish, B. L. Johnson, Lewis Leach, John Lightcap, H. B. Logan, G. M. B. Maughs, E. G. B. McNutt, C. H. Morton, S. L. Platt, Saml. Rinney, Dryden Rogers, T. E. Staples, H. F. Steinhauer, Jacob Tipton, Burrell Thompson, Littleton Tull, F. N. Welles, T. M. P. Whitelock, G. W. Williams, Saml. Woody—39.

1849

The graduating exercises of the Medical Department of the State University were held Thursday evening, March 1, 1849. The church was crowded with an appreciative audience. First address was delivered by President Lathrop and the valedictory by Prof. Thomas Barbour. The following gentlemen received their degrees: J. M. Angel, Joseph Anderson, M. Franklin

Brown, Ira Blackman, Jasper N. Castello, Rich. Heminghaus, Jonathan Dearborn, Jr., Lavinus Dunham, Philip T. Dimmit, George W. Glenn, Silas B. Giddings, Charles B. Gratiot, Charles H. Holloway, Wm. J. Howel, Wm. Jaynes, Absolom Kerns, Achilles Lamma, Russell B. Lewis, Robert Ralston Lynde, Jas. F. Watson, Thomas Montgomery, Charles E. Nash, W. H. Nance, Sherwood A. Owens, Thomas O'Donnell, Oliver B. Payne, James Ramsay, Silas Richardson, Elias C. Raman, Marcellus E. Seely, Geo. H. Stewart, William W. Todd—32. The conferring of degrees was followed by the valedictory address of Prof. Thomas Barbour. Four Ad. E. degrees and seven honorary degrees were conferred.

1850

The graduating exercises of the Medical Department of the State University were held Thursday, Feb. 28, 1850, at the First Presbyterian Church. Prayer by Rev. Dr. Bullard, after which the degree of Doctor of Medicine was conferred on the following gentlemen: Charles C. Allen, Thomas Brooks, Francis Carr, John A. Davis, Burr Davis, Richard Duncan, Chas. W. Dunning, James Elliott, John C. Farmer, Granville Forkner, Wm. H. Garritt, Matthew W. Carthright, Daniel C. Greenleaf, John O. Hamilton, Samuel J. Harrison, Wm. S. Johnson, James H. Kerr, Thomas B. Lester, Edward B. Marshall, Alanson Mathew, Horace Newell, Benjamin Franklin, Mason Packard, Hall W. Pittman, Mickleborough Montague Randolph, John B. Ralph, Kendel E. Rich, Samuel Riddel, James Roman, Chas. H. Roseter, Jas. M. Thompson, Laban W. Upton, Emmerson Worth—33. Ad. E. was conferred on J. M. Baker, J. J. Turney, B. F. Edwards, Adam Nichols—4. The valedictory was delivered by Professor Moore.

1851

The graduating exercises of the Medical Department of the State University took place at the First Presbyterian Church, Thursday, Feb. 27, 1851. Prayer by Rev. Dr. Lyons, after which the degree of Doctor of Medicine was conferred on the following gentlemen: LeGrand Atwood, Thomas S. Barnes, Noah B. Butler, Theodore Case, E. F. Barrett, John Brooker, Lewis Bones, Julius R. L. Clarkson, George W. Connell, David S. Craysdale, William F. Cox, James M. Davis, Wm. D. Dement, James A. Gains, Wm. W. Griswold, James Gooyear, Franklin F. King, Archibald J. Lacy, Timothy Lucas, John S. Williams, Caleb W. Pharr, John W. Ringo, James R. Sands, George H. Sherwood, Nelson R. Small, Wesley H. Parks, James R. Linley, Walter Witty, Frederick A. Williams, Edw. F. Wood, Lewis A. Xaupir—31. Ad. E. degrees conferred on J. W. Chenowith, R. P. Timmerman, J. F. Atkinson, E. S. Look, N.

Mansinger—5. Prof. J. B. Johnson delivered the valedictory address, subject "Duties of a Physician." He paid a deserved compliment to Professor McDowell, to his untiring energy and extraordinary efforts, to which the institution owed so much of its present glorious success.

1852

The annual commencement of the Medical Department of the State University was held Feb. 26, 1852, at Wyman's Hall on Market Street, opposite the Court House. A large attendance was present. An eloquent address was delivered by Professor McDowell. The following gentlemen received their degrees: Jos. S. Atkinson, Richard H. Beatman, Edward H. Bryan, Geo. W. Campbell, John W. Farley, John T. Gillman, Jr., Wm. Goff, Daniel B. Jones, Robert H. Killebrew, Arthur J. Lot, Nicholas B. Martin, David Mock, Erasmus B. Morrison, James J. Morton, Wm. C. Ryley, Wm. G. Sale, Payton Spence, Richard H. J. Talbot, Joseph T. T. Thorns, James B. Walker, Lewis R. Wilcox—21. Ad. E. degrees conferred on Benjamin F. Kavanaugh, John W. Chenoweth, W. D. Greenborg, F. H. Crocket, Andrew B. Barbee—5.

1853

The annual commencement of the Medical Department of the State University was held at Wyman's Hall, Feb. 29, 1853. There was a large attendance present. Valedictory address was delivered by Prof. J. S. Moore. Degree of Doctor of Medicine was conferred on the following gentlemen by Prof. A. Hopton: Albert Ather-ton, Illinois; Beverly A. Barret, Missouri; Aaron S. Clifton, Missouri; Joel Davitte, Missouri; Geo. Elgan, Missouri; Alfred L. English, Illinois; Jas. P. Harrison, Missouri; Benj. D. Hooker, Missouri; Jas. W. Johnson, Illinois; Orville L. Johnson, Mississippi; Robt. Hummal, Arkansas; John W. Kerty, Missouri; Wm. S. Lampkin, Missouri; Morris M. McClure, Mis-souri; I. D. McDonald, Missouri; Philander M. Parker, Illinois; Wm. A. Rawlings, Kentucky; Thos. S. Ruby, Missouri; Archibald B. Sims, Missouri; David Skillman, Illinois; John W. Snyder, Illinois; Napoleon R. Tucker, Alabama; Wm. O. Terry, Illinois; Geo. W. Whitesides—24. Ad. E. degree, Dr. Samuel P. Cutter, Mississippi.

1854

The annual exercises of the Medical Department of the State University were held Feb. 27, 1854. Addresses were delivered by Profs. John Barnes and J. N. McDowell, after which President Shannon, of the State University conferred degrees on the following gentlemen: Isham R. Asbury, Ebenezer Bateman, Richard A. Barret, Jos. W. Bell, Samuel Bender, Geo. M. Boal, Ran-dolph L. Bullock, John G. Blanks, John G.

Bryan, Jos. S. Brown, Josiah J. Crawford, Geo. Hewey, John T. Dobyns, Washington Donell, Jas. R. M. Galkill, Chas. M. Gilkney, Wm. B. Henry, Grief B. Herndon, Benj. F. Hughs, Thos. J. Jones, Solomon P. Jones, Thos. H. Kavan-agh, Benj. F. Kirby, Jas. A. Linsey, Dudley H. Overton, Jas. L. Perryman, Jno. J. Rawlings, James T. Scott, C. P. Slater, E. R. Stone, C. F. Turner, Lewis Willis, Simeon A. Yerger, Charles L. Young—34. Ad. E. degrees, Wm. W. Mayo, Joel Wickman. Honorable degree, John Wat-kinson.

1855

The annual commencement of the Medical Department of the State University was held in Mercantile Hall, Feb. 27, 1855, in the presence of a large audience, Prof. Payton Spence delivering the valedictory address. In the absence of the president of the State University, Professor McDowell conferred the degree of Doctor of Medicine on the following gentlemen: Alfred C. Becker, Alonzo Sidney Barnes, Benj. N. Bond, Samuel M. Check, James R. Douglass, Wm. R. Davis, Jesse R. Evans, J. W. Farmer, Wm. B. Glover, Frank Hunter, Cuthbert L. Jones, Periz S. Jennings, Wm. Lemmon, Geo. H. Long, John L. Mathews, Wm. B. Maupin, Jno. J. McDowell, Hy. C. McPherson, Wm. M. Pettis, James G. Philips, Peter A. Salling, Layman B. Slater, Samuel D. Slater, J. W. H. Spann, J. L. Thomas, Alonzo V. Throp, Junius Tompkins, Wm. H. Winfrey, Jesse W. York, David C. Wallace, Wm. Wickman—31. Ad. E. degree, John G. Bryan, Sr., and A. Parkhurst.

1856

The annual commencement of the Medical Department of the State University was held at Mercantile Hall, Feb. 28, 1856. The vast hall was not only filled, but many persons were compelled to leave because they could not obtain seats. Among the guests present was Governor Sterling Price, who occupied a seat on the plat-form. Prayer was held by President Shannon of the State University, who subsequently ad-dressed the graduating class and conferred the degrees on the following gentlemen: James T. Allen, Lucius Bedel, John H. Davis, Leonard A. Engle, Lewis Fay, John Fetzer, May B. Gorham, George Graham, J. P. N. Gray, Moses Hubbard, Jas. T. Means, John S. Murphy, Charles D. Nuncles, Ephraim M. Poage, Chas. W. Peingler, Jas. H. Rooney, Lucian M. Rhodes, B. Granville Samuel, Richard L. Sullivan, Leonard A. Scott, Jos. S. Scott, Thomas W. Shastid, Joel C. Wil-liams, Armand L. Wynn, Calvin A. Wicks, Elisha E. Waggoner—26. Honorary degrees conferred on Wm. C. Bassett, Henry Chenoweth, Robert Croughton, Milton Lattan—4. Professor McDow-ell delivered an address which contrary to his custom was written, and he evidently felt that

he was bound in an intellectual straight jacket. The address was carefully prepared and, although wanting in the usual characteristics of manner and bold imagery of the distinguished professor, was interesting.

1857

The graduating exercises of the Missouri Medical College were held Feb. 28, 1857, in the Mercantile Hall. The valedictory address was delivered by Prof. E. S. Frazer, who was the first gentleman to receive the degree of Doctor of Medicine west of the Mississippi River, and one of the first graduates of the Medical Department of Kemper College, now the Missouri Medical College, having graduated in 1841. The following is the list of graduates: Lewis H. Calloway, Newton R. Casey, A. M. Davison, Jas. L. Duffield, Jas. M. Edmiston, Leslie Gillets, James M. Grimes, Jas. H. Hall, Jr., Edward R. Hall, J. Drake Harper, Wm. H. Henderson, Benj. C. Henslee, Berry H. Land, W. S. McCall, Chas. F. Mercer, Jos. S. Robertson, Burket H. Sale, Jos. H. Skilling, G. W. Stapleton, C. M. Stewart, Wm. T. Stewart, Fleming B. Todd, John H. Thomas, John R. Trott, Lawson W. Williams, Morgan Willoughby—26. Ad. E. degrees, Edwin A. Casey, H. D. J. F. Boynton, W. Tyler Hutchinson, Jas. S. Davis, Moses Thomas.

1858

The annual exercises of the Missouri Medical College were held Feb. 27, 1858, at Mercantile Hall. The degree of Doctor of Medicine was conferred on the following gentlemen: S. Bull, Illinois; Wm. W. Byrne, Canada; Albert M. Chenoweth; Aug. E. Deming, Indiana; Henry G. Dearbon, Illinois; Wm. A. Gibson, Missouri; Samuel H. Headlee, Missouri; Geo. G. S. Hopton, Missouri; Wm. Henry, Missouri; John Lown, Illinois; Mark G. Lindell, Illinois; Jonathan A. Lewis, Missouri; John Lindley, Illinois; James McDowell, Mississippi; Samuel G. Moore, Missouri; Harvey McDowell, Kentucky; John A. Patton, Missouri; C. P. N. Rooney, Missouri; Joel D. Salmon, Missouri; G. W. Scholl, Illinois; Albert G. Smith, Missouri; Wm. S. Tallmon, Illinois; Thomas G. Tucker, Alabama; H. H. Van Eaton, Illinois—24. Ad. E. degrees were conferred on Drs. Sampel B. Bowls, Missouri; Wade Pollard, Arkansas; C. C. Johnson, Missouri, and Thomas Klipper, Missouri—4. Honorary degree on Dr. Jas. H. Slavens, Missouri. After the exercises Professor Barnes delivered the valedictory address. Professor McDowell also addressed the class.

1859

The annual exercises of the Missouri Medical College were held at Mercantile Hall, Monday evening, Feb. 28, 1859. No further informa-

tion can be obtained of the exercises of this occasion.

1860

The annual exercises of the Missouri Medical College were held Feb. 29, 1860, at Mercantile Hall. *Faculty*.—Dr. John S. Moore, Professor of Theory and Practice of Medicine; Dr. Jos. N. McDowell, Professor of Surgery; Dr. Abner Hopton, Professor of Chemistry and Pharmacy; Dr. John Barnes, Professor of Materia Medica, Therapeutics and Medical Botany; Dr. John T. Hodgen, Professor Anatomy and Physiology; Dr. E. S. Frazer, Professor of Obstetrics and Diseases of Women and Children; Dr. Thomas McMartin, Professor of Pathology and Clinical Medicine; Dr. Drake McDowell, Adjunct Professor of Surgery; Dr. J. McDowell, Demonstrator of Anatomy. *Graduates*.—W. L. Beadles, John W. Benson, Robert D. Blakely, Thomas J. Blake, A. M. Bonham, Jas. E. Bryant, Alton L. Blackburne, Joel W. Bonney, George W. Carter, J. Bowen Clardy, Wm. W. Griscom, A. C. Griswold, E. G. P. Holderness, Saml. B. Houts, Benj. F. Johnson, Samuel H. Jones, Edward Lawrence, Oscar Monning, James C. Neidlet, Joseph W. Noman, Horace W. Pocock, Gustus P. Powers, Sidney A. Scroggin, Wm. L. Short, Edward P. Stewart, Jas. E. Sullivan, John W. Trader, Lorenzo S. Watson, Wm. F. West, Wm. C. Williams—30. Ad. E. degree, Dr. E. F. Bondell. Honorary degrees, Dr. J. McFarland and Dr. McCammell. Dr. Moore delivered the valedictory address.

1861

The annual exercises of the Missouri Medical College were held Feb. 28, 1861, at Mercantile Hall. An interesting address was delivered by Professor Paddock in behalf of the faculty. Dr. McDowell then conferred the degrees on the following gentlemen: Francis P. Adams, Kentucky; David L. Bassett, Missouri; George H. Blank, Missouri; John L. Bradbury, Illinois; Leonidas Brockman, Illinois; Chas. H. Brookins, Illinois; Chas. M. Cornell, California; Wm. C. Day, Missouri; John M. Dunn, Missouri; Boyle S. Ellet, Missouri; Joel H. Farmer, Missouri; Stephen R. Gray, Illinois; Zachariah G. Johnson, Missouri; John L. Whipple, Missouri; Preston Lyle, Missouri; Hugh Smith, Illinois; D. W. Vowles, Missouri; Pulaski Smith, St. Louis; Geo. H. Kuapp, Illinois; Wm. A. Reis, Missouri; Adolphus Green, Missouri; Alpheus M. Rain, Missouri; T. M. Johnson, Missouri; Thos. W. West, St. Louis; Howard A. Cooper, St. Louis; Hartwell Stratton, Tennessee—26. After the exercises Dr. McDowell addressed the class. In his remarks he told the class that in the contingency of a war between the two sections he would leave St. Louis, and act as surgeon in the Southern Army. In view of such a possibility,

he pronounced his benediction on the faculty and the college and his friends generally, but said he should certainly return, if spared, and resume his duties here.

This concludes the best possible account obtainable of the Missouri Medical College, the Medical Department of the State University and the Medical Department of Kemper College, commencing with 1840 and ending with 1861, inclusive.
A. B. BARBEE, M.D.

THE HOUSE FLY

MISS SALLIE LAMBETH
Verona Village School
VERONA, MO.

There are several different kinds of house flies, but one is called the house fly proper, this is the "Musca Domestica". It is a medium sized grayish fly, with mouth part spread out at the tip for sucking up liquid substance, on account of conformation of its mouth part, the house fly cannot bite.

The fly is the scavenger of the atmosphere; a fly destroys some infection in the air, but unfortunately it carries infection and deposits them elsewhere, thus spreading diseases.

L. O. Howard gives the life history of the house fly, it most commonly lays its egg upon horse manure, open garbage can, hog pens, stagnant water, decaying animal or vegetable matter, in fact any kind of filth such as accumulates in our back alleys and sometimes on our main streets. From the habit of breeding in such places it becomes very dangerous to the health of human beings.

The different stages in the life of the fly are the larval and pupal in salen mass; a generation of flies was reared in fourteen days in horse manure, the duration of the egg state was twenty-four hours, the larval state from five to seven days; at Washington it was found in June that each female lays at one time one hundred and twenty eggs, which hatched in eight hours, the larval period lasts five days and the pupal five days, making the total time for development of a generation ten days.

On August the ninth a quarter of pound of well infested horse manure was taken, in it were found one hundred and sixty larve and one hundred puparia, this would be one thousand two hundred house flies to the pound of manure.

Reproduction of the fly is very great. The number of eggs laid by an individual fly at one time is very large. The average is about one hundred and twenty and a single female may lay four such batches, so that the enormous

number in which the insects occur is plainly accounted for.

The flies' habit is to breed in foul places, then try to get into the house and generally light upon the table where the bread or milk is open, or on anything that man eats, thus they leave the germ on the food that they have been on, flies legs and feet are covered with very fine hairs, this is chiefly where the germs are carried. One fly may carry thousands of deadly germs this way, a single fly speck left on bread or other food may contain three thousand disease germs.

The most important reason the fly is despised is because they carry and spread so many dreaded diseases as a carrier of disease germ to those in health, flies carry typhoid fever, a fly from a typhoid fever room has been examined and its feet and abdomen were covered with typhoid fever germs, much of the typhoid fever during the Spanish-American war was due to the contagion carried by the flies.

It is believed by scientists that infantile paralysis is carried by the fly from chickens that have died of the "limber neck" and from hogs having suffered from a similar disease. A fly from consumptive's room carries the germs of this disease to other persons. In case of sickness the room in which the person is should especially be kept free from flies, if any do gain entrance, they should be destroyed, if this is done the disease is not so liable to be carried to other people.

There are a few remedies and preventatives to destroy the fly, cleanliness, by allowing no filth of any kind to accumulate around the premises. Don't allow decayed fruit to accumulate around the place, keep the stables clean, drain off low stagnant water, burn old rubbish, have good screens, use screen fly traps and fly swatters.

In Columbia, Missouri in the summer of nineteen thirteen, they had the fly traps on the streets and on one street they would catch three or four bushels each week.

If people would not only read remedies and preventatives, but enforce them there would be a great many less flies produced.

The fly has its natural enemies like all other insects, the most harmful enemy is a fungus disease. This carries off flies in large numbers particularly at the end of a season, the common house centipede destroys flies in considerable numbers, there is also a small redish mite covers the fly's body and gradually destroys them.

Anyone who willfully tolerates the house fly is either ignorant, filthy, or lazy.

[This paper was written by Miss Sallie Lambeth, a tenth-grade student in the Verona village school, and is original. She had no outside help in writing it.—Dr. W. S. Loveland.]

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

JULY, 1914

EDITORIALS

INCREASE IN MALPRACTICE SUITS, DECREASE IN SETTLEMENTS

That the establishment of a bureau conducted by state medical associations for the defense of members against malpractice bulwarks the position of the unfortunate doctor, has been repeatedly demonstrated in our Association since the defense fund was established. We urge every member to read the report of the Defense Committee published in this issue because the knowledge thus gained—that the growth of the spirit of fraternalism and mutual dependence of physicians on each other in times of adversity—will arouse a broader conception of the powerful influence of the Association and the reality of the advantages of membership among those who have thus far escaped the annoyance and vexation that an action in the courts for malpractice inevitably brings, no matter how unjust and groundless may be the demands. Those members who have been aided by the Defense Committee are fully informed on this subject and have expressed their deep satisfaction that members quite unknown to them responded to the Committee's request for testimony and service during trial with such promptitude, even eagerness, as to call forth the deepest gratitude and greatest respect of the sued member. We want all members to feel the influence of this department of our Association work and therefore ask them to give special attention to the Defense Committee's report.

In this connection we quote the words of the counsel for the New York State Medical Association on the value of the defense provision. It will be seen that conditions in New York are similar to those in our state. This is not to be wondered at, for the nature of all malpractice suits is the same everywhere. One point in the New York report we wish to emphasize is the statement that lawyers who have been in the habit of bringing these suits are becoming discouraged. We can add our statement that the same feeling is very noticeable among the lawyers in Missouri. The New York counsel's report, in part, follows:

More actions have been begun during the last year than during any other year, and if certain years were selected, more have been brought than during any other two years together. There have been fifty-seven brought. It goes without saying, therefore, that the work of counsel has been far greater during 1913 than any other year since malpractice was inaugurated in this state, so much so that much of the time counsel's entire effort has been devoted to the work of the state society.

More cases have been tried this year than in any other. One has been lost, the verdict amounting to \$500. This case, tried in Wayne County, was one of special interest. The husband and wife both sued, but only one action was tried, that of the wife. The claim was that at the time of childbirth the defendant in the action, through negligence, permitted the wife to become septic, with the result that she was compelled to go to a hospital in an adjoining city, and there be treated and undergo a long and painful convalescence, for which she asked damages in a large sum. The facts in the case seem to show that the woman was not septic, but after a period of convalescence she was infected with scarlet fever, was taken to a hospital, and in the hospital placed in the contagious ward. The real question which the jury decided against the defendant, was as to whether or not she actually had scarlet fever, decided wrongfully beyond any question. This case has been taken up on appeal, and will be argued in June, 1914, although the verdict is extremely small.

For years many physicians have settled their own cases, and as I have been about the state attending to my duties, I have heard inquiries as to whether or not the state society represented a various number of physicians. From these inquiries it is evident why the number of cases brought to the attention of your counsel has been small; but now the knowledge of this defense having finally reached the great body of physicians in this state, and realizing as they do the powerful influence for good represented by this organized malpractice defense, I have heard less and less of this settling of cases, and the proposed defendants are walking into court and referring critical patients to your counsel, and are resting secure in the efforts made by our state organization. This is most gratifying, and accounts for the increased number of cases during the present year; now settlements are rare.

Your counsel is confident that there will be a very substantial reduction in the number of cases brought during 1914, because lawyers who are bringing these actions are becoming more and more discouraged.

Such a large number of physicians in various counties have cooperated with me in the success of the past year, that their names would not represent the very best in these counties, and as they rendered their services uniformly gratuitously and without the hope of reward, I shall omit the names. Each community furnishes its full quota, and each community recognizes who these men are.

COMMERCIALISM RAMPANT

"Organization is being carried on by every other profession, business and trade." The *Bulletin* of the Chicago Medical Society is evidently determined that no other business or trade shall outdistance the Chicago Medical *Bulletin* in business and trade. Not only has it departed from the time-honored custom of the ethical medical profession in heralding its

determination to keep the Chicago Medical Society before the public, regardless of its affiliations, but it has imitated right successfully the French and German commercialism by alternating a page of reading matter with a page of advertising. On page 9 in the proposed amendment to the by-laws it warns the medical profession of Chicago that lack of organization has worked havoc in England and Germany and threatens us because of breeches of ethical conduct which are evidently being tolerated in Chicago, such as the wholesaling of emergency surgery, corporation work, contracts with hospitals and fraternal societies. Facing it is a tempting offer to invest the illgotten gains thus in alluring bonds, and those who may not be straight-laced can become so by purchasing a Pomeroy corset to which attention is called in the space opposite page 7, where "Kilkenny Cats" are outdone in a story concerning the sisters of the Women's Medical Society of Chicago.

It may be easy, after following for some time this commercial path, to be able to invest in the 6 per cent. first mortgages advertised on page 14, opposite to the page on which Dr. Humiston, who indorses the commercial spirit, congratulates the *Bulletin* on having become a newspaper, which is really Chicagoesque and consistent, for the newspaper has been the great boom for the medical profession of Chicago without effective protest from, and to the great scandal and discouragement of, the ethical medical profession, which has a right to expect of the organized medical society of the second largest city in this country, that it would conduct itself in keeping with recognized ethical principles.

Why the second largest medical society in the United States should be obliged to stoop to such commercialism as is exhibited in the June 13 number of the official *Bulletin* of the Chicago Medical Society goes beyond the comprehension of the ordinary mind. But such is Chicago and such are its methods. It will not be long before the reaction sets in, for there are in the "windy city" a very large number of very ethical, high-toned physicians who are hiding their faces in shame because of the conduct of their "newspaper" and "politician" members.

OBITUARY

NICHOLSON C. WASHINGTON, M.D.

Dr. Nicholson C. Washington, a graduate of the Washington University Medical School, 1867, for more than forty years a practitioner in St. Louis, died at his home in that city May 6, age seventy.

FRANK H. NETTLES, M.D.

Dr. Frank H. Nettles, of Cape Girardeau, a graduate of Washington University Medical School 1905, died at his home, May 11, age forty-two, from Bright's disease. Dr. Nettles had been ill for some time, but bravely persisted in his labors despite the warnings and advice of physicians until he was compelled to cease from his labors. He sank rapidly and passed away although conscious until just before he died. Dr. Nettles received his early education in the common schools in his county after which he studied pharmacy and took his degree in that profession. He was elected coroner of Cape Girardeau County and served four years. He was a member of the county and state medical associations.

C. F. WAINWRIGHT, M.D.

Dr. C. F. Wainwright, former dean of the University Medical College in Kansas City and a widely known physician and medical instructor, died at his home in Englewood, N. J., May 7, of heart disease. In recent years he was a lecturer on internal medicine at the Post-Graduate Hospital in New York, but because of ill health he gave up the position a year ago and with his wife and daughter took up his residence at Englewood. Dr. Wainwright was 56 years old. He was born in Lewis County, Missouri, July 11, 1858, and was graduated from Bellevue College.

He became dean of the University Medical College in Kansas City in 1890 and rapidly won a place among the leading practitioners of the city. He was an active member in the county and state medical societies, and was widely known socially. In 1901 he moved to New York where he won recognition in the medical profession of that state.

NEWS NOTES

DR. THOMAS J. HARVEY of St. Louis, died at his home in that city, April 22, aged 38.

THE Jasper County Medical Society is after the quacks in Joplin. One man recently was arrested. The *Joplin News Herald* is cooperating with the physicians.

THE Nebraska State Medical Association is investigating the feasibility of establishing a journal of their own, the journal to be owned and controlled by the Association.

THE State Board of Health held a meeting in St. Louis, June 15, 16 and 17 to examine applicants for license to practice.

DR. R. E. CASTELAW, Kansas City, has resigned as Superintendent of the General Hospital. It is said the new board of health wants its "own" man as Superintendent.

DR. J. J. FULKERSON, of Lexington, died at his home June 6, aged 65 years. He was long a member of the organization and was a very influential factor in medical work as well as in politics.

THE Texas State Medical Society has adopted the defense provision to protect its members against malpractice suits. The members will be assessed \$1 per year to provide the funds.

THE Wisconsin State Medical Association has raised its assessment for medical defense from \$1 to \$2 per year. It was found that the expenses of conducting the defense of the members under the \$1 assessment was rapidly exhausting the funds.

DR. J. B. WRIGHT, of Trenton, has sailed for Europe. He will attend the Clinical Congress of Surgeons in London, July 27. Before his departure he was entertained at a luncheon at the Hotel Robidoux, of St. Joseph, by some of his medical friends in that city.

THE Ohio State Medical Association has begun preparations to establish medical defense for its members against malpractice suits. A committee was appointed at the last annual session of the Association to draw up plans for inaugurating this feature of membership.

CALDWELL County Medical Society has ordered the purchase of a quantity of "Men's Specialists Frauds," published by the American Medical Association. These books will be distributed among the editors of the county newspapers for their information and guidance.

DRS. GRACE AND SIMPSON, of Chillicothe, have taken out papers of incorporation and will erect a building to cost about \$10,000. On the lower floor of the building will be modern offices which the physicians will occupy, while the second story will contain apartments for families.

JUNE 20 a special car was attached to the New York Limited train on the Pennsylvania Line from St. Louis to Atlantic City to accommodate a party of St. Louis physicians, and

physicians in other parts of the state attending the American Medical Association. Four physicians from Oklahoma were in the party.

THE *Iowa Medical Journal* has discontinued publication. Since the establishment of *The Journal of the Iowa State Medical Association* the field has been quite barren for other medical journals. This leaves Iowa with no other medical publication except the *Iowa Homeopathic Journal* and the *Bulletin of the Iowa State Board of Health*.

DR. GUY B. MITCHELL, of Branson, Taney County, is a candidate for the legislature from that county. Dr. Mitchell has been a member of the medical organization for many years and is well equipped to fill the position to which he aspires. He is a graduate of the University Medical College of Kansas City, 1901, and practiced in Kansas City for four years before going to Branson.

DR. S. J. CRUMBINE, the energetic secretary of the Kansas State Board of Health, has developed a plan for organizing the pupils in the schools into a health brigade. Each week one pupil is appointed health officer for the week. It is his duty to watch the children and instruct them in the rules of hygiene and sanitation. He says the plan has resulted in much good in the Topeka schools and he hopes to put it in practice in all the schools of Kansas.

THE Nebraska State Medical Association changed its defense laws at this year's meeting making it obligatory for all members to pay the assessment of \$1 for the defense fund. Hitherto the payment of the special assessment for the defense was optional with the members. "This benevolent action was taken by the sheer force of the great good which has been done by the few dollars hitherto collected," says the *Western Medical Review*, in which the official proceedings were published.

DR. JOHN S. WALLACE, of Brunswick, is a candidate for State Senator from the Sixth District which includes the counties of Chariton, Linn and Sullivan. Dr. Wallace has been identified with the medical organization for many years and has held a number of positions in his county, including that of coroner for four years. He was for a number of years the editor of the *Chariton County Brunswicker*, and has been identified with all movements that made for progress in his district. He is a graduate of the Bellevue Hospital Medical College, 1873. He is a member of the County and State Associations and a Fellow of the American Medical Association.

HERE is the way the Nebraska State Medical Association tackles the fee-splitting evil among its members. "A committee was provided for, whose sole duty will be to investigate information to the effect that members give and take divisions of fees without the knowledge of the patients. The machinery is furnished to promptly and effectively investigate every complaint and it provides the punishment that fits the crime, to-wit: two years' expulsion from the county society, when so ordered by this committee; disobedience of the county society to be followed equally promptly by discipline from the Nebraska State Medical Association. Should the culprit after reinstatement be found to return to his dishonorable practices, he is then to be expelled for life."

MEMBERSHIP CHANGES IN MAY

New Members

- Baerens, Oscar F., 303 Commercial Bldg., St. Louis.
- Baird, J. Edward, Excelsior Springs.
- Barson, John W., Ononogo.
- Burke, W. E., 3353 Market Street, St. Louis.
- Carpenter, A. L., Joplin.
- Ernst, Edwin C., Mullanphy Hospital, St. Louis.
- Harutun, Moses B., Joplin.
- Hoshaw, Ulysses G., Joplin.
- Isherwood, Hortense L., Carl Junction.
- Korn, Adolf L., Joplin.
- Leaming, H. A., Joplin.
- Robinson, G. Canby, 1806 Locust Street, St. Louis.
- Wagner, Mathias A., 5294 Page Avenue, St. Louis.

Change of Address

- Bryant, Jewel, Rombauer to Leora, Mo.
- Cole, Paul F., Steffenville to Ewing, Mo.
- Fassett, Chas. W., St. Joseph to 234 West Sixty-Second Street, Kansas City, Mo.
- Finch, Hiram C., Hitt, Mo., to Pulaski, Iowa.
- Eyer mann, Chas. H., Philadelphia, Pa., to 1722 S. Jefferson Avenue, St. Louis.
- Geh rung, Eugene C., St. Louis, Mo., to 15 E. Forty-Eighth Street, New York, N. Y.
- Hall, Robert G., St. Louis, to New Bloomfield, Mo.
- Hutton, W. S., Farmington to Fornfelt, Mo.
- Johnston, B. L., Tyrone to Dykes, Mo.
- McHaffie, C. H., Rogersville to 400 W. Commercial Street, Springfield, Mo.
- Mitchell, O. W. H., Columbia, Mo., to Syracuse, N. Y.
- Reichmann, P. J., Westphalia to Rensselaer, Mo.
- Strickland, W. R., Galt, Mo., to Agency, Iowa.
- Tinsley, J. H., Orla to Competition, Mo.

Reinstated

- Simonds, Wallace, Cross Timbers.

Members Dropped

- Johnson, Clarence A., Los Angeles, Cal.
- Nicholson, Samuel T., Baltimore, Md.
- Thompson, J. M., Meadville, Mo. (resigned).
- Waller, C. E., Troy, Kan.

Deceased

- Nettles, Frank H., Cape Girardeau.

SOCIETY PROCEEDINGS

Missouri State Medical Association

**Fifty-Seventh Annual Meeting, held at Joplin,
May 12-14, 1914**

MINUTES OF THE HOUSE OF DELEGATES

Carnegie Library

Tuesday, May 12, 1914—Morning Session

The House of Delegates was called to order by the President, Dr. E. H. Miller of Liberty, at 9:30 a. m., in the Carnegie Library.

The roll call was answered by the following members:

<i>County</i>	<i>Delegate</i>
Audrain.....	J. G. Moore, Mexico
Barry.....	W. M. West, Monett
Bates.....	C. A. Lusk, Virginia
Boone.....	G. L. Noyes, Columbia
Butler.....	T. J. Redwine, Poplar Bluff
Caldwell.....	J. A. Waterman, Breckenridge
Callaway.....	Martin Yates, Fulton
Carter-Shannon.....	T. W. Cotton, Van Buren
Clay.....	Frank H. Matthews, Liberty
Cooper.....	J. F. Roberts, Boonville
Daivess.....	W. L. Brosius, Gallatin
Dent.....	T. G. Hunt, Salem
Dunklin.....	Paul Baldwin, Kennett
Gas-Maries-Osage.....	J. O. Cooper, Freeburg
Gentry.....	John W. Rice, Berlin
Greene.....	W. P. Patterson, Springfield
Grundy.....	J. F. Fair, Trenton
Henry.....	R. D. Haire, Clinton
Hickory.....	H. C. Brookshire, Hermitage
Howell.....	J. H. Elliott, West Plains
Jackson.....	J. D. Griffith, Kansas City
Jackson.....	Wm. Frick, Kansas City
Jackson.....	F. E. Murphy, Kansas City
Jackson.....	J. N. Jackson, Kansas City
Jackson.....	C. C. Conover, Kansas City
Jackson.....	J. B. Henderson, Kansas City
Jackson.....	J. Q. Chambers, Kansas City
Jackson.....	E. H. Thraillkill, Kansas City
Jasper.....	J. B. Taulbee, Joplin
Johnson.....	O. B. Hall, Warrensburg
Lafayette.....	G. W. Fredendall, Lexington
Lewis.....	John C. Nunn, Maywood
Macon.....	E. S. Smith, Macon
Miller.....	W. S. Alee, Olean
Pettis.....	A. E. Monroe, Sedalia
Phelps.....	S. L. Baysinger, Rolla
Pike.....	T. Guy Hetherlin, Louisiana
Platte.....	Spence Redman, Platte City
Randolph.....	C. B. Clapp, Moberly
Saline.....	D. F. Manning, Marshall
St. Charles.....	F. J. Tainter, St. Charles
St. Joseph-Buchanan-Andrew.....	W. T. Elam, St. Joseph
St. Joseph-Buchanan-Andrew.....	Daniel Morton, St. Joseph
St. Louis.....	Edwin Schisler, St. Louis
St. Louis.....	Robert Barclay, St. Louis
St. Louis.....	O. H. Brown, St. Louis
St. Louis.....	Walter B. Dorsett, St. Louis
St. Louis.....	Robert M. Funkhouser, St. Louis
St. Louis.....	Albert F. Koeter, St. Louis
St. Louis.....	J. H. Amerland, St. Louis
St. Louis.....	W. H. Stauffer, St. Louis
St. Louis.....	Walter Baumgarten, St. Louis
St. Louis.....	A. H. Hamel, St. Louis

St. Louis.....Wm. T. Coughlin, St. Louis
 St. Louis.....Joseph Grindon, St. Louis
 St. Louis.....Robert E. Schlueter, St. Louis
 Taney.....G. B. Mitchell, Branson
 Wright.....J. A. Fuson, Mansfield

Dr. Jackson, Kansas City, moved that the minutes of the previous meeting be approved as published in the JOURNAL. Seconded and carried.

The President stated he had no formal message but that he would incorporate in his presidential address the recommendations he intended to offer.

Dr. J. H. Taulbee, Joplin, Chairman of the Committee on Arrangements, made a verbal report on the accommodations and entertainments provided for the members while they are in the city.

The Chairman of the Judicial Council not being present, that report was postponed.

The Chair called attention to the printed pamphlet in which appeared the report of the Committee on Revision of Constitution and By-Laws, as follows:

Your Committee on Revision of Constitution and By-Laws recommends the following changes:

Amend Chapter VIII, Section 5, by striking out all paragraphs (a) to (c), inclusive, and substituting therefor the following:

Sec. 5. The Defense Committee shall consist of three members who shall, on request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against members of the Association.

CONDITIONS

(a) Any members whose annual dues have been received by the Secretary of this Association 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 this Association.

(a) Any member whose annual dues have 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 enrollment as a member or during his delinquency; nor if the services for which malpractice is alleged were rendered wholly or in part before 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 on 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 one case shall the cost to this Association be in excess of \$100 for all such services. The Association does not obligate itself nor shall it pay in whole or in part any damages agreed on 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 sanitarium 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.

Amend Article IV, Section 2 of the Constitution, "Members," by inserting after the word "be" in the second line the words "such of," and after the last word of the section add the words "as shall be approved by this Association," so that the section shall read:

Article IV, Section 2, Members. The members of this Association shall be such of the members of the component County Societies as shall be approved by this Association.

A. B. MILLER,
 SPENCE REDMAN,
 T. O. KLINGNER, *Chairman,*
The Committee.

Dr. Jackson moved that the amendments be adopted as proposed by the Committee on Constitution and By-Laws. Seconded.

Discussion by Drs. Baysinger, McAlester, Jackson, Elam, Griffith, Grindon and Goodwin.

Dr. Baysinger of Rolla moved to amend Division (a) in Section 5 of Chapter VIII of the proposed amendment so that the words "this Association" in lines two and four be changed to read "the County Society," so that this portion of the proposed amendment shall read: "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." Seconded and carried.

Dr. Breuer moved to amend Division (c) of the proposed amendment by striking out the figures \$100 and in lieu thereof insert "\$250," so that the section shall read: "The committee shall thereupon provide such medical expert and legal services of counsel as may be necessary, but in no one case shall the cost to this Association be in excess of \$250 for all such services." Seconded. Discussion by Drs. Grindon, Jackson, McAlester and McComas.

Dr. Baysinger moved to lay the whole matter on the table until we hear from the Committee on Defense. Seconded and carried.

The Secretary read the proposed amendment to Article IV, Section 2 of the Constitution entitled "Members," as follows:

Amend Article IV, Section 2 of the Constitution entitled "Members," by inserting after the word "be" in the second line the words "such of," and after the last word of the section add the words "as shall be approved by this Association," so that the section shall read:

"Article IV, Section 2, Members. The members of this Association shall be such of the members of the component county societies as shall be approved by this Association."

Discussion by Drs. Morton, Jackson, Elam, Frick and McAlester.

The Secretary read the amendment to Article VIII, Section 1, introduced last year by the Committee on Constitution and By-Laws, which reads as follows:

"The officers of this Association shall be a President, five Vice-Presidents, a Secretary, a Treasurer, a Chairman and Vice-Chairman of each section, a Secretary of each section, who shall be an Assistant Secretary of the Association, and twenty-nine Councilors, more or less, as shall be determined by the House of Delegates from time to time," to read as follows:

"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."

Dr. Jackson of Kansas City moved the adoption of the amendment. Seconded and carried.

The Secretary read the amendment introduced last year to amend Article VIII, Section 3, of the Constitution, which reads as follows:

"The Vice-Presidents, Councilors and members of the Committee on Public Policy and Legislation, shall be elected by the House of Delegates on the morning of the last day of the annual session, but no Delegate shall be eligible to any office named in the preceding chapter except that of Councilor, Chairman, Vice-Chairman or Secretary of a Section; 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 past two years; to read as follows:

"The President, Vice-Presidents, Councilors and Orators shall be elected by the House of Delegates; but no Delegate shall be eligible to any office named in the preceding Chapter 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."

Dr. Jackson of Kansas City moved the adoption of the amendment. Seconded and carried.

The Secretary read the amendment introduced last year to amend Section 4 of Article VIII, which reads as follows: "The President and the Orators shall be elected by the General Assembly on the morning of the last day of the meeting."

Dr. Breuer moved the adoption of the amendment. Seconded and carried.

Dr. Breuer moved to amend Section 2 of Chapter V of the By-Laws, by adding at the end of the section the following words: "Except that of President and Orators, who shall be nominated from the floor of the House of Delegates." Seconded and laid on the table for one day.

Dr. Jackson moved that Dr. A. W. McAlester, Jr., of Kansas City, be made a provisional member of the Committee on Constitution and By-Laws, owing to the absence of one of the members of the committee. Seconded and carried.

The report of the Committee on Scientific Work was read by the Chairman, Dr. E. J. Goodwin, and on motion was received and adopted. (See page 41.)

The report of the Committee on Health and Public Instruction was read by the Chairman, Dr. A. R. McComas. On motion the report was received and adopted. (See page 42.)

The report of the Defense Committee as published was, on motion of Dr. Jackson, postponed until the afternoon session.

Dr. Jackson moved that the Constitution and By-Laws be printed and distributed among the members at the earliest convenience after the conclusion of this session. Seconded and carried.

The report of the Publication Committee was read by Dr. W. H. Breuer, the Chairman, and on motion adopted. (See page 38.)

Dr. Jackson moved, which was duly seconded, to receive the report of the Council on Medical Education as published. Carried. (See page 39.)

The Secretary read his annual report. On motion the report was referred to the Judicial Council. (See page 37.)

Dr. Welch read the treasurer's report. Dr. Elam moved the report be referred to the Judicial Council. Seconded and carried. (See page 38.)

Dr. Grindon of St. Louis read the report of the Committee on Vaccination. On motion the report and recommendations were referred to the Committee on Health and Public Instruction. (See page 42.)

Dr. McAlester of Kansas City read the report of the Committee on the Prevention of Blindness. On

motion of Dr. Elam the report was received as read. (See page 44.)

The Chairman of the Committee on Expert Testimony not being present, the report was passed to the afternoon session by the President without action.

It was moved the report of the Committee on Necrology be received as published.

Dr. Jackson moved to supplement that motion by directing that this report be incorporated in the records of the Association and a vote of thanks be extended to Dr. Harris for the splendid manner in which he has gotten up this report. Seconded and carried by rising vote. (See page 45.)

The President announced the following members on the Committee on Nominations: W. S. Allee, Olean; F. H. Matthews, Liberty; S. L. Baysinger, Rolla; J. H. Elliott, West Plains; Jabez N. Jackson, Kansas City; A. E. Monroe, Sedalia; D. F. Manning, Marshall; Wm. P. Patterson, Springfield; A. F. Koetter, St. Louis.

On motion the House adjourned until 3 p. m.

Tuesday, May 12, 1914—Afternoon Session

The House convened at 3 o'clock with Dr. E. H. Miller, the President, in the chair.

The report of the Committee on Expert Testimony was read by Dr. C. R. Woodson, Chairman. (See page 34.)

Dr. E. S. Smith of Macon introduced the following resolution:

WHEREAS, the present system used in the employment of medical experts in legal controversy causes these experts to be arrayed against each other, and,

WHEREAS, there is oftentimes an innate tendency on the part of the medical expert to be biased toward the side which has secured and paid for his services, and,

WHEREAS, expert evidence is so diluted and clouded by the avalanche of objections and extraneous matter on the part of the opposing counsel that the jury is at a loss to apply the evidence intelligently in making up their verdict, and,

WHEREAS, many judges express themselves as unimpressed by expert evidence and public confidence in our moral integrity is becoming sadly shaken,

THEREFORE, "Be it resolved by the Missouri State Medical Association that the suggestions offered in this preamble meet with the approval of the Association and to the end that such suggestion may get to the profession at large throughout the state and through the profession to the next legislature of the state in the form of a carefully prepared bill. We do hereby pledge the Association and the members thereof to all earnest efforts to induce the next legislature of this state to enact such legislation as will prohibit the use of witnesses of specially employed Medical Experts in any litigation, whether civil or criminal, and make provision for the appointment of Court Experts in every case, whose compensation shall be fixed by the court and who shall be paid out of a fund provided for that purpose.

The President, without motion, referred the resolution to the Judicial Council.

Dr. Woodson moved that it is the sense of the House of Delegates that we are opposed to the receipt by any member of this Association of a contingent fee for expert testimony in any case in any of the courts of Missouri. Seconded.

Dr. Clapp moved to include any physician in the state.

Dr. Breuer moved to lay the motion on the table.

Dr. McAlester offered a substitute as follows: That the President appoint a committee to renew negotiations with the State Bar Association in regard to the prepa-

ration of a bill to be presented in the next legislature on expert testimony. Seconded and carried.

Dr. Grindon, for the Committee on Vaccination, offered the following resolution:

RESOLVED, That the Missouri State Medical Association urge on the General Assembly of the State of Missouri the enactment of a law, when in the opinion of the Committee on Health and Public Instruction it be deemed advisable, requiring all physicians practicing in this state to make annual returns as to the number of vaccinations performed by them, specifying how many of the individuals so vaccinated have a scar or scars from previous vaccinations, and, when ascertainable, whether the vaccination was successful.

On motion this was referred to the Committee on Health and Public Instruction.

The President called for nominations for the place for the next session.

Dr. T. Guy Hetherlin of Louisiana Pike County: I am requested by the Business Men's League of Louisiana to invite the Association to meet in Louisiana.

Dr. Morton of St. Joseph: I was instructed by the St. Joseph-Buchanan-Andrew County Medical Society to invite this Association to hold its next meeting in St. Joseph. We feel that we are entitled to the next meeting and we want your presence. You have not been in Northwest Missouri since 1902, nearly thirteen years ago. Our city is accessible from every section of the state. We have competent and adequate hotel facilities and all the requisites for giving you the halls for meeting places which are necessary. We have a profession that wants you to come, is anxious to have you come, we have a Commercial Club which has extended you an invitation, and have gone further, they have put up a handsome sum of money for your entertainment while you are there, and we hope that this Association will come to St. Joseph next year. I, therefore, beg that you will give St. Joseph your most careful consideration in this matter and that you will come to St. Joseph at the next meeting.

Dr. Hetherlin: Mr. Chairman, I would like to state that I neglected to say that Pike County Medical Society wants you.

The Secretary read a letter from the Excelsior Springs Commercial Club inviting the Association to meet in Excelsior Springs in 1915.

Dr. Matthews: I came here instructed to ask the Association to meet at Excelsior Springs next year. Hotel facilities and accommodations to fit all requirements are not to be surpassed anywhere.

Dr. Wm. Frick moved the nominations be closed. Seconded and carried.

Dr. Jackson of Kansas City: While the ballots are being passed I would like to make the statement to the House that I have had the opportunity to read an address which Dr. Matthews has prepared for the Medical Secretaries' meeting to-morrow night on the subject of "Medical Education." As a member of the State Committee on Medical Education, it has occurred to me that it is a paper that should be heard by the entire Association. I move, therefore, that the Secretary of the Association be instructed to arrange a time and place on the regular program for Dr. Matthews to present his paper to the General Session. Seconded and carried.

The ballots were counted with the following result: St. Joseph, 30; Excelsior Springs, 23; Louisiana, 2; Jefferson City, 4. The President declared St. Joseph was the choice for the next meeting.

Dr. Elam: I wish to thank the State Association, in behalf of the St. Joseph-Buchanan-Andrew County Medical Society, for its acceptance of their invitation to come to St. Joseph next year and I assure you

that if there is anything to be done by the St. Joseph-Buchanan-Andrew County Medical Society it will be done without a question of a doubt. We thank you.

The Chair called for miscellaneous matter. Is the Defense Committee ready to report?

Dr. Schlueter, Chairman, read the report of the Defense Committee. On motion, the report was referred to the Judicial Council.

Dr. Funkhouser: Before disposing of this matter I would like to introduce a resolution in response to the recommendation of the Defense Committee regarding Dr. A. H. Madry:

RESOLVED, That we have suffered a severe bereavement in the death of Dr. A. H. Madry, Councilor of the 28th District. He was enthusiastic in the advancement of organized medicine and was indefatigable in the performance of his duties. He never shirked and ever responded when called on to assist as a member of this organization. We deeply feel his loss and take this occasion to signify our sympathy to his family. Be it further

RESOLVED, That a page be set apart in our records in commemoration of his death and that a copy of these resolutions, which is signified by a rising vote, be sent to his bereaved widow and family. Seconded and unanimously carried.

The President: Some resolutions brought before the House of Delegates this morning were discussed quite lengthily and on motion were tabled until the Defense Committee had reported this afternoon. This committee having made its report, I think the ruling of the Chair would be that it is now in order to take up that motion. The Chair will entertain such a motion.

Dr. Jackson: The motion offered by Dr. Breuer was a financial one. I move you, therefore, that the motion be taken from the table and referred to the Judicial Council. Seconded and carried.

On motion the House adjourned to meet Wednesday morning at 8:30 o'clock.

Wednesday, May 13, 1914—8:30 a. m. Session

No meeting of the House was held at this hour because of no quorum and the President announced a meeting for 3 p. m. this day.

Wednesday, May 13, 1914—Afternoon Session

The House convened in adjourned session at 3 o'clock with the President, Dr. E. H. Miller, in the chair.

The President read a telegram from Dr. John D. Seba of Bland informing the Association of the conviction of a chiropractor.

Dr. Griffith of Kansas City moved that a vote of congratulation be wired Dr. Seba. Seconded and carried.

Dr. McComas introduced the following resolution:

RESOLVED, That this Association especially approves the action of Representatives in Congress, Hon. Walter L. Hensley, Hon. Thos. L. Ruby, Hon. Chas. H. Booher, Hon. Wm. P. Borland, Hon. Richard Barthold, Hon. L. C. Dyer and Hon. Wm. L. Igoe in voting against the effort to merge the Surgeon General's Library with the Congressional Library, and condemns that of the representative of the First District, the Hon. James T. Lloyd, in voting in its favor, and be it further

RESOLVED, That the Secretary is instructed to send a copy of these resolutions to every member of this Association in Mr. Lloyd's District. Seconded and carried.

Dr. Lutz reported for the Judicial Council that the Council recommends the appropriation of \$1,500 to the

Defense Committee. On motion the report was adopted.

Dr. Lutz further reported for the Council that the Council recommends the adoption of the amendment to the By-Laws proposed by the Defense Committee which had not previously been acted on by the House and which had been referred to the Judicial Council. He moved that the House concur in the proposed changes. Seconded and carried.

Dr. Grindon moved to reconsider the vote adopting the amendments to Article VIII, Section 3 of the Constitution. Seconded and carried.

Dr. Grindon moved to amend Section 3 of Article VIII by striking out the words "and Orators," so that the section shall read:

"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." Seconded and carried.

Dr. Grindon moved that Section 4 of Chapter III of the By-Laws be amended by omitting the words "and Orators" so that the section shall read: "No address or paper read before the Association except that of President, shall occupy more than twenty minutes in its delivery, and no member shall speak longer than five minutes or more than once on any subject. Seconded and carried.

The Secretary read the amendment to Chapter V, Section 3, introduced at the Tuesday Session, as follows: Add after the final word in the section the following: "Except that of the President and Orators who shall be nominated from the floor of the House of Delegates."

Dr. Grindon moved to amend the amendment by striking out the words "and Orators." Seconded and carried.

Dr. Grindon moved the adoption of the amendment as amended, as follows: "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 on the morning of the last day of the annual session, at which time the President shall be elected." Seconded.

Dr. Jackson moved as a substitute, to strike out the words, "on the last day of the annual session," and substitute therefor the words, "the evening session of the House of Delegates," and insert at the beginning of the paragraph the words, "The House of Delegates shall remain in continuous session on the first day of the annual meeting and complete the work before it at that session," so that the section shall read: "Chapter V, Section 3: The House of Delegates shall remain in continuous session on the first day of the annual meeting 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 session of the House of Delegates." Seconded and carried.

The President announced the resignation of Dr. W. A. Clark, Councilor of the Nineteenth District.

Dr. Allee moved the resignation be accepted.

Dr. Lutz moved to supplement the motion and couple with it the thanks of the Association for the very efficient work Dr. Clark has performed in his District. Seconded and carried.

Dr. Allee moved that when the House adjourn, it adjourn to meet at 8:30 a. m., Thursday morning, and by unanimous consent it was ordered that the report of the Nominating Committee and the election of officers be made the special order of business at that hour. Seconded and carried.

Dr. Dorsett moved that no commercial exhibits be permitted within the hall where the sessions are being held. Seconded and carried.

On motion the House adjourned until 8:30, Thursday morning.

May 14, 1914—Morning Session

The meeting was called to order by the President, Dr. E. H. Miller, at 8:30 a. m.

The Secretary read the minutes of the previous meeting. Dr. Lutz moved the adoption of the minutes as read. Seconded and carried.

Dr. F. J. Lutz, Chairman of the Judicial Council, reported that the Committee on Health and Public Instruction had referred the paper of Dr. F. H. Matthews on the subject of "Some Needed Medical Legislation" to the Council. He stated this paper had been read in general session on Wednesday, the 13th, by special request. The Council had spent time in discussing the subjects treated of in the paper and had referred the matter to the Publication Committee for such action as it deemed best.

Dr. Lutz further reported that the Council had reelected Dr. J. Franklin Welch, Salisbury, Treasurer of the Association, and reelected Dr. E. J. Goodwin, St. Louis, Secretary of the Association; that the Council had elected Drs. F. J. Lutz, A. R. McComas and L. W. Cape to serve with the President and Secretary of the Association as the Executive Committee. The Council further had elected Dr. F. J. Lutz of St. Louis Chairman of the Council and Dr. E. J. Goodwin of St. Louis, Secretary of the Council.

Dr. W. S. Allee of Olean moved the report be adopted. Seconded and carried.

The President called for the report of the Nominating Committee, which had been made the special order of business for this hour, and Dr. W. S. Allee of Olean, the Chairman of the Committee, responded with the following report:

We, your committee, respectfully present the following nominations for officers, in accordance with the Constitution and By-Laws, namely:

Vice-Presidents: J. A. McComb, Lebanon; G. O. Cuppidge, Moberly; W. G. Estill, Lawson; T. A. Coffelt, Springfield; W. A. Clark, Jefferson City. Delegates to the American Medical Association: A. W. McAlester, Jr., Kansas City; E. H. Miller, Liberty; H. L. Reid, Charleston. Member Committee on Health and Public Instruction: A. W. McAlester, Jr., Kansas City. Member Committee on Vaccination: W. S. Wheeler, Kansas City. Defense Committee: Robert E. Schlueter, St. Louis; Walter B. Dorsett, St. Louis; R. Emmet Kane, St. Louis; Councilors: Fifteenth District, H. S. Crawford, Harrisonville; 19th District, S. V. Bedford, Jefferson City; 22d District, G. S. Cannon, Fornfelt; 26th District, W. H. Breuer, St. James; 27th District, J. H. Elliott, West Plains; 28th District, T. O. Klingner, Springfield; 29th District, R. L. Wills, Neosho.

(Signed) W. S. ALLEE, Olean, *Chairman*.
F. H. MATTHEWS, Liberty,
S. L. BAYSINGER, Rolla.
J. H. ELLIOTT, West Plains,
T. GUY HETHERLIN, Louisiana,
J. N. JACKSON, Kansas City,
A. E. MONROE, Sedalia,
D. F. MANNING, Marshall,
WM. P. PATTERSON, Springfield,
A. F. KOETTER, St. Louis.

Dr. O. H. Brown of St. Louis moved the adoption of the report. Seconded and carried.

The President announced that the election of President was now in order and called for nominations.

Dr. W. B. Dorsett of St. Louis nominated Dr. C. R. Woodson of St. Joseph; Dr. A. F. Koetter of St. Louis nominated Dr. H. C. Shuttee of West Plains; Dr. A. E. Monroe of Sedalia nominated Dr. W. J. Ferguson of Sedalia. On motion the nominations were closed and the House proceeded to ballot on the nominations for President. Forty ballots were cast, with the following result:

Dr. H. C. Shuttee, 25; Dr. C. R. Woodson, 11; Dr. W. J. Ferguson, 4.

The President announced that Dr. H. C. Shuttee had been elected President of the Association for the year 1914-1915.

Dr. Allee moved that a committee of three be appointed to confer with Dr. Shuttee and present him to the members at the General Session immediately following the adjournment of the House of Delegates. Seconded and carried.

The President appointed Dr. W. S. Allee of Olean, Dr. A. F. Koetter of St. Louis and Dr. Spence Redman of Platte City.

The Secretary read the following resolution prepared by Dr. A. W. McAlester, Jr., of Kansas City:

BE IT RESOLVED, That the House of Delegates of the Missouri State Medical Association express their appreciation of the numerous courtesies extended to the members of this Association by the Jasper County Medical Society, and its most excellent Committee on Arrangements, by the Mayor, by the Commercial Club and other civic bodies of Joplin. And be it further

RESOLVED, That we most heartily commend the Joplin *News Herald* for the advanced stand it has taken in the protection of the health of the people by the suppression of quackery in medicine and the furthering of the cause of protective medicine; and that a copy of these resolutions be sent to the Jasper County Medical Society and to the editor of the *News Herald*.

On motion the resolution was unanimously adopted.

Dr. F. E. Murphy called attention to an article in the Joplin Daily *Globe* of May 12, in which details of the extent to which tuberculosis existed in Jasper County and of the fight against this disease which is being conducted by the Jasper County Anti-Tuberculosis Society. Dr. Murphy suggested that this Association and the State Board of Health should take some action to encourage the efforts of the citizens of Jasper County toward lessening the ravages of tuberculosis in Jasper County.

Dr. W. S. Allee of Olean moved that the President appoint a committee of three to draft suitable resolutions to be presented at the general meeting of the Association during this session. Seconded and carried. The President appointed on this committee Dr. F. E. Murphy of Kansas City, Dr. A. E. Monroe of Sedalia and Dr. C. C. Cummings of Joplin.

The Secretary read the following telegram from Dr. J. J. Fulkerson:

LEXINGTON, May 13, 1914.

Missouri State Medical Association:

"The sender regrets inability because of severe illness to be with your useful, scientific and honorable body at annual meeting and expresses a wish that you will as always wage unrelenting war on microbes and all enemies of health and will show no quarter to Ishmaelites either in or out of the profession.

The Secretary read a letter from Dr. H. B. Norton of Center, Delegate from Ralls County, regretting his inability to be present, and also the inability of his alternate, Dr. T. J. Downing, to attend the meeting.

On motion the House adjourned at 9:45 a. m., *sine die*.

MINUTES OF THE JUDICIAL COUNCIL

Connor Hotel

Tuesday, May 12, 1914

The Judicial Council was called to order in the parlor of the Connor Hotel at 12:30 p. m., Tuesday, by Dr. F. J. Lutz, Chairman.

At roll call the following answered present: L. A. Todd, St. Joseph; J. B. Wright, Trenton; L. W. Cape, Maplewood; A. R. McComas, Sturgeon; C. M. McConkey, Lathrop; F. E. Murphy, Kansas City; C. T. Ryland, Lexington; Frank DeVilbiss, Tipton; W. A. Clark, Jefferson City; F. J. Lutz, St. Louis; T. W. Cotton, Van Buren; T. T. O'Dell, Ellington; W. H. Breuer, St. James; J. H. Elliott, West Plains; T. O. Klingner, Springfield; R. L. Neff, Joplin.

The Chair appointed as Auditing Committee, Drs. Frank DeVilbiss, Chairman; T. W. Cotton and J. B. Wright, to whom the books of the Treasurer and the books of the Secretary were submitted for examination.

On motion of W. H. Breuer the report of the Secretary was read. After a detailed explanation of all points requiring the attention of the Council by the Secretary, L. W. Cape moved that a committee of three be appointed to take the matter of Dunklin County and Butler County under consideration and report to the Council. Seconded and carried.

The Chair appointed on the Investigating Committee F. E. Murphy, L. A. Todd and J. H. Elliott. This committee was instructed to invite the representatives of the counties involved to appear before the committee.

T. W. Cotton, Councilor of the Twenty-fourth District, reported on the condition existing in Stoddard and Butler counties and suggested that they be hyphenated, but he desired to defer action until the Investigating Committee reported.

On motion of Dr. Cotton, duly seconded and carried, Carter-Shannon County Medical Society was taken out of the Twenty-seventh District and placed in the Twenty-fourth District.

L. A. Todd, Councilor of the Second District, reported on conditions in his district and made the request to change the name of the St. Joseph-Buchanan-Andrew County Medical Society to the Buchanan County Medical Society. He read the following petition from St. Joseph-Buchanan-Andrew County Medical Society:

To the Judicial Council and the House of Delegates of the Missouri State Medical Association:

In accordance with Section 10, Chapter IV of the By-Laws of the Missouri State Medical Association, we hereby petition your body for permission and authority to change the name and title of the St. Joseph-Buchanan-Andrew County Medical Society.

(Signed) J. J. BANSBACH, *President*,
W. F. GOETZE, *Secretary*.

After considerable discussion, W. H. Breuer moved that the Council instruct Dr. Todd to make an earnest effort to organize a County Society in Andrew County, procure a charter for that county and then make application for a separate charter for Buchanan County, the Council to grant separate charters on the surrender of the joint charter now existing. This motion was seconded and carried.

On motion of Dr. Breuer, Dallas County was taken out of the Twenty-sixth District and placed in the Twenty-eighth District.

Dr. Breuer moved that the action of the Executive Committee in revoking the charter of Worth County Medical Society be approved. Seconded and carried.

Reports were made by Councilors J. B. Wright, Trenton; A. R. McComas, Sturgeon; C. M. McConkey,

Lathrop; F. E. Murphy, Kansas City; T. C. Ryland, Lexington; Frank DeVilbiss, Tipton; W. A. Clark, Jefferson City; F. J. Lutz, St. Louis. Dr. Lutz made special mention of the taking over by the St. Louis Medical Society of the St. Louis Medical Library, which has added very materially to the usefulness of the Society. Other reports were made by Councilors G. M. Rutledge, Ste. Genevieve; T. W. Cotton, Van Buren; T. T. O'Dell, Ellington; W. H. Breuer, St. James; T. O. Klingner, Springfield, and R. L. Neff, Joplin.

Election of officers for the ensuing year followed: Dr. Breuer moved that F. J. Lutz be reelected as Chairman. Seconded and carried.

On motion, seconded and carried, the Council appointed the Chairman, A. R. McComas, L. W. Cape, together with the President and Secretary of the Association, to act as the Executive Committee during the year 1914-15.

On motion of A. R. McComas, seconded and carried, J. Franklin Welch of Salisburly, was reelected as Treasurer of the Association.

On motion of Frank DeVilbiss, E. J. Goodwin, St. Louis, was unanimously reelected Secretary-Editor of the Association.

It was moved by Dr. DeVilbiss that Dr. Goodwin be elected Secretary of the Council. Seconded and carried.

Dr. Breuer moved that the Secretary-Editor and the Treasurer shall receive the same salaries as last year. Seconded and carried.

By order of the Council the bonds of the Secretary and of the Treasurer remained the same as last year.

On motion the Council adjourned to meet in the parlor of the Connor Hotel, Wednesday at 12 o'clock.

Wednesday, May 13, 1914

The Council convened at 12 noon, sixteen members present.

The Auditing Committee reported having examined the books of the Treasurer and of the Secretary and found them correct. On motion the report was adopted.

L. A. Todd reported for the Committee on Investigations.

F. E. Murphy reported for the same committee on another phase of the investigation.

Dr. McComas moved the adoption of the reports and recommendations of the committee. Seconded by Dr. Cape. After a discussion by Drs. Murphy, Breuer, Cotton and the Secretary the motion prevailed.

Dr. McComas, Chairman of the Committee on Health and Public Instruction, informed the Council that his committee had been in consultation with the Legislative Committee of the State Board of Health and that Dr. Matthews, President of the State Board of Health, said he expected to offer an amendment at the coming session of the legislature to amend the medical practice act in regard to preliminary educational requirements. Dr. McComas asked the advice of the Council on this subject. The question was discussed by Drs. Allee, Clark, DeVilbiss, Pearse, Murphy and the Chairman.

Dr. Clark moved that it is the sense of the Council that while we think it might be a good measure, we deem it impracticable and that we do not support it at this time. Seconded and discussed by Drs. Breuer and DeVilbiss, after which the motion carried.

Dr. DeVilbiss said the General Session had adopted a motion, after the reading of Dr. Matthews' paper on "Some Needed Medical Legislation," in which Dr. Matthews advocated amending the medical practice act in regard to preliminary educational requirements, that the paper be published in the secular press. He also said that another motion had previously carried in the

session referring to the paper to the Council on Health and Public Instruction. Dr. DeVilbiss said he thought it would be a mistake to publish this paper in the press as it might lead to garbled accounts reaching legislators of our attitude toward medical students and be a detriment to us in preventing bad legislation.

The question was discussed by Drs. Pearse, Murphy and the Chairman.

Dr. Breuer moved that the question of publishing Dr. Matthews' paper be left in the hands of the Council and referred to the Executive Committee for disposition. Seconded and carried.

Dr. Cotton, Councilor of the Twenty-fourth District, moved that Stoddard County be hyphenated with Butler County and the two counties be placed in the Twenty-fourth District. Seconded and carried.

The Council then invited Dr. Schlueter, Chairman of the Defense Committee, to address the members. Dr. Schlueter explained why the recommendations in the Defense Committee's report should be adopted. The question was discussed by Drs. Welch, Breuer, DeVilbiss, Cape, Murphy and the Chairman.

Dr. McComas moved that \$1,500 be appropriated out of the general fund to the defense fund and that the Executive Committee be authorized to transfer back into the general fund any sum for the needed expenses of the Association should this be found necessary. Discussion by Drs. Welch and Wright, after which the motion carried.

The Chairman asked the opinion of the Council concerning the general recommendations of the Defense Committee. Discussion by Drs. Breuer, McComas and Schlueter.

Dr. Cape moved that the recommendations of the Defense Committee be approved. Seconded and carried.

The Chairman announced that the Council by its vote recommends the change in the By-Laws proposed by the Defense Committee and that \$1,500 be appropriated to the Defense Fund.

On motion adjourned *sine die*.

REPORTS OF COUNCILORS

First District, Dr. C. L. Evans, Oregon, Councilor: Atchison County Medical Society.—Members who have paid dues for 1914, 13; not paid, 2; moved out of state, 1; transferred to another County Society, 1. From May 1, 1913, to May 1, 1914, three meetings were held with an attendance of from 3 to 6 members. It is plain to be seen that we are afflicted with lack of attendance, but the enthusiasm and interest during the meetings is excellent. "The program is carried out with a degree of enthusiasm that indicates we have not reached the cadaveric state although we may be somewhat somnolent," says the Secretary.

Holt County Medical Society.—Members in good standing, 20; new members, 1; retired, 1; lapsed, 1. We have held 3 meetings during the year with an average attendance of 8.

Nodaway County Medical Society.—Members in good standing, 32; delinquents, 4; retired, 1; dropped, 2. We have had 6 regular meetings during the year.

Second District, Dr. L. A. Todd, St. Joseph, Councilor: The St. Joseph-Buchanan-Andrew County Medical Society has an active membership of 111; honorary members, 2; total, 113.

During the year 18 meetings were held with an average attendance of 36. Two meetings were social sessions and one was addressed by a distinguished out of the city guest. Eighteen papers were read and discussed throughout the year and several clinical cases shown; there were also verbal reports made of the American Medical and Missouri State Medical Asso-

ciation meetings. Dr. J. H. White, Surgeon U. S. Department of Health, in February delivered an excellent address on "The Scope of Public Health Work and Its Relation to Local Conditions."

During the year the Society maintained a healthy growth and manifested activity along the lines of social and civic welfare.

Third District, Dr. G. W. Whiteley, Albany, Councilor: I have been unable to meet the DeKalb County Society for the reason that I must go to St. Joseph or Gallatin, Davies County, to get into the county by rail, then waiting for the trains to take me to the place of meeting, causing me a loss of the greater part of two days and a night; or a thirty-mile drive over bad roads and the same loss of time, but I have a report from the Secretary of the County Society herewith attached.

Worth County is hopelessly tangled and I cannot see any way out of the difficulty. Have visited the county with the State Secretary, and have written to the County Secretary and have talked to him over the telephone, but he tells me that he can do nothing with the county. The charter of this county has been revoked.

Harrison County is in good working organization, and is doing well; see report by the Secretary attached herewith.

Gentry County is in good condition and has 19 members. We have had some little violations of the laws under the ethical requirements of members, but the Society with animus to none gave its members to understand that they must not transgress or they would be barred from the Society. Have not had as many meetings as we might, but think we will do better in the future. The members are in accord with the raise in the membership fee so as to give more latitude to the Committee on Defense. Surely if we are going to defend our members we should place a sufficient fund at their disposal to be of some benefit. The Secretaries Report as follows:

Report of Secretary of DeKalb County: In compliance with your request I will answer as follows:

In good standing, 7; meetings in 1913, 4. In fact, not much done in this county last year, but are making an effort to do more this year. Already have caused the arrest of a quack, but don't know what will be done.

Report of Secretary of Harrison County: Meetings of Harrison County Medical Society for the year 1913:

Feb. 17, 1913, at Ridgeway—business meeting—officers elected. No papers.

April 15, 1913, at Bethany—no quorum present. No papers.

July 24, at Bethany—afternoon and evening meetings, Dr. A. H. Vandivert of St. Joseph read a paper on "Pellagra," Dr. Miller of Liberty gave a talk urging stricter quarantine laws. Dr. Dunham of Pattonsburg gave his experiences as health officer of that place during the flood of 1909. In the evening Dr. Miller of Liberty talked on "The Fly in Typhoid Fever." Dr. A. H. Vandivert talked on quarantine in cases of small-pox. Dr. O. A. Schmid resigned as Secretary-Treasurer of the Society at this meeting.

Dec. 16, 1913, at Bethany, Dr. W. Worth, Vandivert, elected Secretary-Treasurer to fill Dr. Schmid's unexpired term. Paper by Dr. L. R. Webb, "Acute Dilatation of the Stomach From the Standpoint of the General Practitioner," discussed by Dr. A. H. Vandivert.

No meetings as yet in 1914.

W. WORTH VANDIVERT, *Secretary*.

Sixth District, Dr. A. C. Crank, Canton, Councilor: In Lewis County every eligible physician is a member of the County Society. Meetings will be held monthly during the summer; interest and attendance are above the average for counties without a large town, and a

great deal has been planned to make the scientific work particularly valuable in the future.

In Knox County the membership is small but very efficient; this county was perhaps the first in the state to solicit and receive funds from the county court to observe a tuberculosis day; speakers were secured, the county was toured in autos, and the various modes of prevention, communicating media, and the cost in dollars to the citizenship were explained to representative people who came out in force throughout the county and manifested a surprising interest in this most important subject. This Society inaugurated a move to establish a District Medical Society composed of Adair, Knox and Lewis counties, which I expect to see carried out and doing creditable work not later than September 1 of this year. No dissension has arisen over the raise in membership dues and on the whole the district is strongly supportive of the State Association.

Tenth District, Dr. C. H. Dixon, Councilor: Circumstances have arisen which will make it impossible for me to be with you this year, much as I regret it. I had planned for some time and arranged my business to be ready, but we have no control over the "Silent Messenger" which came to a near relative to-day, consequently I must forego the pleasure of attending our Association meeting. Had I foreseen this I would have had a comprehensive report of my district. I have done my best in my own county. I think all the old ones have paid up and one or two new ones. There are a few eligibles not in the Society, but indifference is the only reason we cannot get them in. I have visited Randolph County twice to stir them up. Moberly is a good, small city with many good men. Macon is certainly alive, but how else can they be with such a live wire at work and "on the job" all the time as Dr. A. B. Miller of Macon City. I wish there were more like him.

Eleventh District, J. D. Brummall, Salisbury, Councilor: I report for this district membership as follows: Carroll, 13; Chariton, 16; Linn, 25; Livingston, 19; total, 73. The counties hold regular meetings, monthly or bi-monthly and quarterly, with fair attendance. The interest in each county is fair and about as good in one as in the other.

We held a district meeting in Chillicothe, March 19, 1914. From the cities and outside counties we had a good attendance, but I am sorry to say that outside of Livingston County the district was poorly represented. We had a good program which was well carried out. At the public meeting at night addresses were made by our President, Dr. E. H. Miller of Liberty, Dr. E. J. Goodwin and Dr. F. J. Lutz of St. Louis. All were very interesting and instructive. Our next meeting will be held at Brookfield. There is one malpractice suit in my district. This was continued by request and at cost of plaintiff until fall. Otherwise peace and harmony prevail.

Twelfth District, Dr. C. M. McConkey, Lathrop, Councilor: Caldwell County Medical Society has 21 members in good standing, 6 eligible non-members, and 2 ineligible physicians in county. They meet monthly except in February and March; have a good organization and are doing some mighty fine work.

Clay County Medical Society has 29 members in good standing. No eligible non-members but several ineligible physicians in the county. They meet once each month, alternately at Liberty and Excelsior Springs. Have good meetings, good attendance, enthusiasm and are doing excellent work.

Clinton County Medical Society has 19 members in good standing, 5 eligible non-members and 5 ineligible physicians in the county. They meet quarterly; have good meetings (one of which at least is open to the public each year); have not failed in years to have meeting as scheduled.

Davies County Medical Society has 18 members in good standing, 7 eligible non-members, 2 ineligible physicians in county. They meet quarterly and have had excellent meetings during the past year; in fact the best in history of the Society; good attendance and good programs. They are now planning a series of public meetings, which will no doubt be a decided success. There are some live wires in this Society.

Platte County Medical Society has some 17 members in good standing and a few ineligible in the county. They have a good organization, meet quarterly and have good programs. The member that launched out into the saloon business withdrew his membership and has since retired from the saloon business.

Ray County Medical Society has 18 members in good standing and 11 eligible non-members in the county. They have been meeting quarterly and having good meetings. They have not had so much enthusiasm in their meetings so far this year as usual, but they believe in a good finish and no doubt, true to their former record, they will round out the year as well as the last year and in former years.

Thirteenth District, Dr. Franklin E. Murphy, Kansas City, Councilor: The Jackson County Medical Society has at this time about four hundred members. Year by year our programs become more attractive. We have weekly meetings. The meetings held this year have shown an average attendance of eighty-nine. We are enjoying a course of lectures on tropical diseases by Dr. Craig of the United States Army. Dr. Craig is considering the diseases to which he has devoted much research. These lectures are held on nights other than the nights of our regular meeting. Recently the Eye, Ear, Nose and Throat Section of our Society held an all-day clinic to which physicians in this part of the country were invited. As guests the Section had men from Chicago and St. Louis. To the clinics, which were held in the Kansas City General Hospital, more than a hundred men were in attendance, representing the states of Texas, Kansas, Iowa, Nebraska and Oklahoma. The Section means to make this clinic an annual event.

The Society has held one open meeting in the interest of the "vice crusade," at which talks were made by ministers, lawyers, doctors, and others.

Lastly we have to report the success of the rendition by members of this Society of the first act of Bernard Shaw's "The Doctor's Dilemma." As to the quality of this production you will have the opportunity of judging yourself during the session.

Fourteenth District, Dr. C. T. Ryland, Lexington, Councilor: Saline County has 31 members paid for 1914, 1 member not paid, and 2 members delinquent. Meetings are held the second Tuesday in each month. The average attendance has been 20 and much interest is shown by members.

Cooper County has 16 members paid for 1914 and 1 delinquent. There are 5 physicians eligible but not members. Meetings are held irregularly; many members never attend, and most of them not often. Very little interest is shown.

Lafayette County has 26 members paid for 1914 and 6 members not paid. There are 8 physicians in the county not members. They held 9 meetings with an average attendance of 15.

Sixteenth District, Dr. E. N. Chastain, Butler, Councilor: Barton County Medical Society.—Members in good standing, 11; delinquents, 2; 1 member was dropped; eligible physicians in the county not members, 7. There were 4 meetings held during the past year, with an average attendance of 8. There were 8 papers read before the Society during the year and 10 cases reported or clinics presented.

Bates County Medical Society.—Members in good standing, 27; delinquents, 7; new members, 1; eligible

physicians in the county not members, 4. There were 9 meetings held during the year with an average attendance of 8. At these meetings 9 papers were read and discussed and 6 clinics presented.

Cedar County Medical Society.—Members in good standing, 11; delinquents, 1; eligible physicians in the county not members, 10. There were four meetings held during the year with an average attendance of 7. There were 4 papers presented during the year and 6 clinics.

Vernon County Medical Society.—Members in good standing, 30; new members, 2; delinquents, 2; eligible physicians in the county not members, 8. There were 4 meetings held during the year with an average attendance of 8. At these meetings there were 18 clinics presented to the Society.

All the counties organized are doing good work, but I have not been able to do any work in Dade County.

Seventeenth District, Dr. S. G. Kelly, Councilor, Sedalia: Pettis County is having meetings the first and third Monday night of each month. As a general thing we have very good meetings but not the attendance we should have for a society with as many members as we have. Out of about 40 members we usually have about 10 present at the meetings and a paper read and discussed. We hope to have a better attendance and I urge the members all the time to be present. Have been trying to have some public meetings, but they do not seem to take well.

Benton County has a very nice little Society and meet regularly about every two months. I attended the last meeting and, as at previous meetings, was very favorably impressed. They usually have two papers and a nice clinic. A public meeting is arranged for in June and some foreign talent will be called in. This Society is progressing.

Henry County has made two efforts to have a meeting but failed, or rather, sent me word they could not meet.

Hickory County I have not visited as it is very inaccessible. The members are all paid up and they are having regular meetings.

Eighteenth District, Dr. Frank DeVilbiss, Councilor: Number of members, 39; eligible doctors not members, 18; lost during year by removal, 1; by lapse, 6; gained during year, 2. In Moniteau and Miller counties a good organization has been maintained. In Camden, it requires a great sacrifice of time and effort to attend the County Society meetings, besides there are not many doctors in the county. An organization exists in the county, but no meetings have been held during the past year.

In Morgan County there is considerable indifference and lethargy. While an organization exists and there are quite a number of good active doctors in the county, there is such little interest manifest that the membership gets very little benefit from it.

Twenty-third District, Dr. T. C. Allen, Bernie, Councilor: Dunklin county since its reorganization about a year ago has done fairly satisfactory work. I think the work in Pemiscot County has been very good, but no particular progress has been made during the year.

New Madrid County has been doing perhaps the best work in the district and I think will continue to do so.

Stoddard County has not held a meeting for more than a year and has not done satisfactory work for two years. It was recently suggested to consolidate this county with the Butler County Medical Society, which is, I believe, a wise move.

I have been unable to get a response from a single County Secretary as to work during the year.

Twenty-fourth District, Dr. T. W. Cotton, Van Buren, Councilor: Carter-Shannon, while not holding regular meetings during the year, has had its organiza-

tion kept up and the last meeting, held recently, was well attended and good interest manifested. It was decided to have meetings quarterly in the future, which will probably be an improvement over the former plan.

Wayne County reports a fairly satisfactory year's work with a good membership and considerable improvement over former years.

Up to date I have had no answer from my letter as to conditions prevailing in Butler and Ripley counties, but Butler County has for years had an active County Society, the strongest in the district and a good record for activity as a medical society.

Ripley County has not had a society since my incumbency as Councilor. I made more than one effort to arrange a date for a meeting of the physicians, but have so far failed. I think perhaps a personal visit from the Councilor would be worth while; however, after offering my services, I waited to be invited.

My situation during the year now closing has been such that I could not give the personal attention needful to this office, and while I am hopeful to do better next year, yet if some one else who can give the work more time would take it, I would be pleased to have him do so. There were three doctors in my town; one died, the other has been incapacitated from illness, so it has been unsatisfactory for me to leave my post even for a short time; however, the indications are better for the future.

Twenty-fifth District, Dr. T. T. O'Dell, Councilor: The Secretaries of the various County Societies report as follows:

Dr. B. J. Robinson, St. Francois County Society, reports 20 members in good standing, which is approximately 40 per cent. of the physicians in the county. Had three meetings during 1913 with an attendance of about 60 per cent. of the membership. Only a few members show activity in keeping up the Society.

Dr. R. W. Gay reports for Iron County: seven members in good standing, with about twelve in the county. Had stated meetings regularly last year with most of the members attending. Much of the professional work is done by physicians of adjoining counties, hence the small number in the county.

Dr. J. D. Robinson of Belgrade, Secretary of the former Washington County Society, reports they have ceased to exist. Also have communications from Dr. Goodwin, including letter from Dr. J. P. Townsend of Potosi, stating they were going to reorganize. The application for charter for same, I hope, will appear in the near future.

In my home county, Reynolds, we have but 11 physicians, 10 of whom are active members of the Society. We have our meetings quarterly, owing to inconvenient transportation, but have an attendance of 80 per cent. to 100 per cent.

To recapitulate: The three counties of the district that are organized have an aggregate membership of 37, which is about 50 per cent. of the physicians. Meetings fairly regular with an average attendance of about 70 per cent. of the membership.

Twenty-sixth District, Dr. W. H. Breuer, St. James, Councilor: The general condition of the medical societies in this district is excellent, thanks to the good work of each local organization.

There are only six physicians in the district eligible to membership that are not members of the Association, and only six practicing physicians who are not eligible to membership. I feel very proud of this condition and hope that during the year 1914 we may be able to enlist the entire number of eligible practitioners in the ranks of organized medicine.

Phelps County Medical Society has 15 members in good standing, 1 physician in county not eligible. They have held 11 regular meetings, with 4 clinics presented and 12 papers read.

Pulaski County Medical Society has a total of 16 members, 1 eligible physician not a member, no physician in the county not eligible. They held 4 regular meetings last year, with 3 clinics presented to the Society.

Crawford County Medical Society has 13 members, 1 eligible physician not a member, no physicians in the county not eligible. They held 8 regular meetings last year with 1 clinic presented to the Society.

Dent County Medical Society has a total of 9 members and 2 eligible physicians not members; 1 physician in the county not eligible to membership. Four regular meetings were held last year and 3 clinics presented to the Society, while 3 papers were read.

Laclede County Medical Society has 16 members and 2 eligible physicians not members, while 4 physicians in the county are not eligible. Four regular meetings were held last year, with 5 clinics presented and 3 papers read before the Society. They had one special meeting with a lecture on special work.

Twenty-seventh District, Dr. J. H. Elliott, Councilor: On Aug. 6, 1913, Dr. E. J. Goodwin, State Secretary, and your Councilor, J. H. Elliott, met in Mountain Grove and effected an organization of Wright County with a membership of 11 physicians. The President chosen for 1913 was Dr. J. M. Rogers of Mansfield, and Dr. E. J. Butzke of Mountain Grove as Secretary and Treasurer, Dr. J. A. Fuson of Mansfield as Delegate to this meeting and Dr. Robert A. Ryan of Norwood as Alternate.

The organization is in good condition, as has been reported by the Secretary to the Councilor, and there seems to be an increasing interest and enthusiasm among the physicians of the county, almost all the eligible physicians in the county having become members.

From Mountain Grove Dr. Goodwin and Dr. Elliott went on the 7th of August to Ava, Douglas County, to organize a County Society in that county. We met nine of the physicians and effected a partly completed organization, as they seemed to be in need of information, the aims and purposes of the State Association, and whereby they could be benefited materially by becoming members of the State organization. The information was given as best we could in the short time between trains. Seven physicians have become members of the State Association, but never applied for a charter. Therefore, I would recommend that they become members of the Wright County Society, if such an arrangement meet with the approval of the two counties.

This work completes all that is possible to organize into County Societies now in the Twenty-seventh District as most of the eligible physicians in Oregon County are members of the Howell County Society, and there are not enough practicing physicians in Ozark County to form a Society there; those who are practicing in that county have become members of the Howell County Society.

The Howell County Society is doing some nice work, as all eligible physicians are members. They are all working harmoniously and progressiveness is the aim of its members.

The Greene County Society has exchanged essayists with Howell County Society, an arrangement that bids fair to develop a broader and deeper interest and enthusiasm for Society work among our physicians.

Twenty-eighth District, Dr. T. O. Klingner, Springfield, Councilor: Christian County Medical Society.—Members in good standing, 8; no delinquents; 4 eligible physicians in county not members and no ineligible physicians in county. Have held 3 meetings during the past year, with an average attendance of 6. There were 10 papers of a scientific nature read and discussed before the Society during the year and 20 cases reported or clinics presented.

Lawrence-Stone County Medical Society.—Members in good standing, 25, and 2 members delinquent. There are 6 eligible physicians in the county not members and 4 ineligible physicians in the county. The Society has held 4 meetings during the past year with an average attendance of 20, at which 20 papers of a scientific nature were read and discussed, and 4 cases reported or clinics presented.

Polk County Medical Society.—Members in good standing 15, and two members delinquent. There are 11 eligible physicians in the county not members and no ineligible physicians. They have held 4 meetings during the past year; average attendance, 13; 17 papers of scientific nature were read and discussed during the year and 16 cases reported, or clinics presented.

Dr. Roberts, the Secretary, says: We have quarterly meetings, June, September, December and March, the second Tuesday in the month. The attendance includes two or three honorary members, but there are 15 paying members in good standing. I have not included several who are graduates in medicine who are eligible non-members because they are not in practice and are following other callings; have been doing so for years.

Webster County Medical Society.—Members in good standing 11, and 1 member delinquent. There are 2 eligible physicians in the county not members and 5 ineligible physicians in the county. They have held 4 meetings during the past year, with an average attendance of 10. Ten papers of scientific nature were read and discussed.

The Society is in fine condition in every respect but we have had several of our members move from this locality, leaving a big gap in our membership. Still have several quacks and ineligible men in our territory with no hopes of getting rid of them without help from the Missouri State Board of Health.

Greene County Medical Society.—Members in good standing 75, and 3 delinquent; 15 eligible physicians in the county not members and 10 ineligible physicians in the county. They held 20 meetings during the past year, average attendance 19, and 18 papers of scientific nature were read and discussed before the Society during the year, while about twelve cases were reported or clinics presented.

I consider the Greene County Medical Society in good condition. The committees are awake to their duties; the attendance is fair, the members are loyal to the Society and take an interest in the meetings.

The Society has been quite active in trying to rid the county of illegal practitioners, quacks and charlatans, suits having been filed against three such persons. Dr. Wyatt, a graduate of the famous McCormach School, who claimed to be able to cure many diseases by fitting the patient with glasses, was arrested for practicing medicine without a license. The date was set for trial but the evidence was so strong against him that he begged to have the suit dropped on his promise to leave the state. Unfortunately, we agreed to grant his request.

Suit has also been filed against two chiropractors. One asked to have the suit dropped on promise that he would leave the state, which he did. The other, Dr. Fenter, said he would fight to the finish, and we hope to finish in July.

Prior to my appointment as Councilor, three suits for alleged malpractice had been filed against physicians in this district, two of which have been decided, the verdict being in favor of the defendant in each case. The suit against the two other members is still pending in court. It will probably be settled during the next term, which will be held in July. Another suit, filed last December, has been called for the July term, but the date has not been set. The Society, however, is not assisting in this suit.

MINUTES OF THE GENERAL SESSION

New Joplin Theater

Tuesday, May 12, 1914—Morning Session

The meeting was called to order by the President, Dr. E. H. Miller of Liberty, at 9 a. m. No Vice-President being present, Dr. Miller requested Dr. Frank DeVilbiss of Tipton to act as Chairman, and Dr. John R. Hall of Napton to act as Secretary while the President and Secretary attended the House of Delegates.

The Chairman announced the first number on the program, a paper on "The Diagnosis of Congenital Syphilis in Infants and Children," by Dr. Edwin H. Schorer of Kansas City, which was read by title.

Dr. Greene D. McCall of Fulton then read a paper entitled, "Report of a Case of Renal Calculi." There was no discussion.

The paper of Dr. E. H. Thraillkill, Kansas City, on "Treatment of Fistula in Ano," and the paper of Dr. W. S. Gregory, St. Joseph, on "A Case of Pruritus, with Deductions," were read by title.

Dr. Fred T. Van Eman, Kansas City, then read a paper on "Placenta Praevia," which was discussed by Dr. E. A. Burkhardt of Kansas City; discussion closed by Dr. Van Eman.

Dr. A. Jackson McNees of Clinton read a paper entitled "The Early Recognition of the Clinical Significance of Gastric Disturbances," which was discussed by Dr. G. H. Hoxie of Kansas City, Dr. McNees closing.

The Chairman announced the next paper on the subject of "Cervical Ribs," and stated that the author, Dr. Caryl Potter of St. Joseph, being unable to be present, desired that Dr. T. E. Potter read the paper before the session. It was moved, seconded and carried that this be done. The paper was discussed by Dr. W. H. Lanyon of Joplin and Dr. C. R. Woodson of St. Joseph.

It was moved, seconded and carried that Dr. C. R. Woodson of St. Joseph be asked to read a paper which he had prepared on the subject of Expert Testimony.

The work of the morning session was concluded by Dr. Woodson's paper. There being no discussion, the meeting adjourned at 11:30 a. m.

Tuesday, May 12, 1914—Afternoon Session

The meeting was called to order at the New Joplin Theater by Dr. N. P. Wood of Independence at 2 p. m. Dr. Wood announced that the meeting would at once proceed to a consideration of the scientific program.

Dr. R. M. Schaufler, Kansas City, read a paper on "The Treatment of Deformities Following Infantile Paralysis." This paper was discussed by Dr. G. W. Wilse Robinson, Kansas City, Dr. Schaufler closing.

The next number was a paper on "Diabetes" by Dr. L. C. Ross of Springfield, which he read. There was no discussion.

Dr. R. H. McBaine asked that the title of his paper be changed from "Treatment of Diabetes" as given in the program to "The Dispensary Treatment of Diabetes Mellitus," as the paper was based on observation of cases seen in dispensary work. This paper was discussed by Dr. G. H. Hoxie, Kansas City, Dr. McBaine closing.

A paper on "Intermittent Hydronephrosis" was then read by Dr. C. W. Russell, Springfield.

Dr. Clarence Capell, Kansas City, moved that as his paper was on a similar subject to that of Dr. Russell these two papers be discussed together. This motion was seconded and carried.

Dr. Capell then read a paper on "Diagnostic Procedures in Urology," illustrated with lantern slides. The papers were discussed by Dr. E. G. Mark of Kan-

sas City, O. H. McCandless of Kansas City, Dr. Russell closing.

The papers of Dr. Henry J. Scherck, St. Louis, entitled, "A Few Observations in Regard to Kidney Surgery," and of Dr. W. H. Luedde, St. Louis, entitled "The Giant Magnet in General Practice," were then read by title.

Dr. H. C. Shuttee, West Plains, followed with a paper on "Sprains." Discussion by Dr. M. P. Shy of Sedalia and Dr. C. W. Russell of Springfield.

The paper of Dr. T. C. Boulware, Butler, on "Fracture of the Patella and Treatment," concluded the afternoon session, which adjourned at 5:20 p. m.

Tuesday, May 12, 1914—Evening Session

The meeting was called to order by N. P. Wood of Independence at 8:15 p. m. in the New Joplin Theater.

Dr. Wood introduced the Honorable Hugh McIndoe, Mayor of Joplin, who delivered an address of welcome and turned the keys of the city over to the President.

Dr. A. W. McAlester of Columbia, responded to the address of welcome.

Dr. N. P. Wood, the presiding officer, introduced the President, Dr. E. H. Miller of Liberty, who delivered the President's Address.

At the conclusion of the President's Address, Dr. T. F. Lockwood of Butler delivered the Oration on Medicine. He was followed by Dr. T. E. Potter of St. Joseph, the Orator on Surgery.

The meeting adjourned at 10:30 p. m.

Wednesday, May 13, 1914—Morning Session

The meeting was called to order by the President, Dr. E. H. Miller, at 9 a. m., who announced the first paper on the program, "The Use of the Electro-Cardiograph in the Study of Cardiac Conditions," by Dr. G. Canby Robinson of St. Louis. This paper was read by the author and illustrated by lantern slides. It was followed at once by the paper of Dr. P. T. Bohan, Kansas City, on "Cardiac Arrhythmia," illustrated by lantern slides; the paper of Dr. Leo C. Huelsmann of St. Louis was read by title; Dr. George H. Hoxie, Kansas City, read his paper on "Respiratory Rhythm in Heart Failure"; Dr. Charles H. Neilson of St. Louis followed with a paper on "Treatment in Heart Disease"; Dr. Franklin E. Murphy, Kansas City, concluded the program with a paper on "Functional Affections of the Heart."

The President then announced that Dr. F. H. Matthews of Liberty, President of the Society of Medical Secretaries and President of the Missouri State Board of Health, had a paper on "Some Needed Medical Legislation," and unless objection was made by the members, would be heard at this time at the request of the House of Delegates. The President then requested Dr. A. E. Hertzler, Kansas City, to take the chair.

The paper of Dr. Matthews was then heard.

Dr. Hertzler announced that the Symposium on Heart Disease was open for discussion.

Dr. H. E. Pearse, Kansas City, moved that the paper of Dr. Matthews be referred to the Council on Health and Public Instruction and that they be requested to bring about the changes asked for in the paper. This was seconded and carried.

Dr. William T. Coughlin, St. Louis, moved that the paper read by Dr. Matthews be published in the lay press of the state. This was seconded by Dr. Frank J. Tainter of St. Charles and carried.

The papers of the Heart Symposium were then discussed by Dr. W. G. Moore of St. Louis, Dr. Thomas B. Hall of Marshall and Dr. T. G. Hetherlin of Louisiana. Discussion was closed by Dr. G. Canby Robinson and Dr. Charles H. Neilson.

Dr. T. Guy Hetherlin of Louisiana demonstrated "The Duffield Method of Resuscitation of the New-Born," which was discussed by Dr. E. A. Burkhardt of Kansas City.

The meeting then adjourned at 12 m.

Wednesday, May 13, 1914—Afternoon Session

The meeting was called to order by the President, Dr. E. H. Miller, at 1:50 p. m., and proceeded at once with the scientific program.

Dr. William W. Duke, Kansas City, read a paper on "Status Lymphaticus and Status Hypoplasticus and Their Possible Relationship to Internal Secretions." Discussion by Drs. E. A. Burkhardt, G. Wilse Robinson and J. G. Sheldon of Kansas City, Dr. Duke closing.

Dr. Paul Y. Tupper of St. Louis followed with a paper on "Cancer of the Cecum at the Site of Appendiceal Lesions," which was discussed by Dr. A. E. Hertzler of Kansas City.

The President announced a meeting of the House of Delegates to be held at once, the delegates being requested to report and Vice-President, Dr. Hertzler, took the chair.

The paper of Dr. W. A. Shelton, Kansas City, on "Local Anesthesia in Major Surgery," was then read by the author.

The Chairman asked the consent of the body to the postponement of the discussion until the succeeding paper had been read, as both touched on the same subject, and consent was given.

Dr. Elmer D. Twyman of Independence, then read a paper on "Upper Abdominal Explorations under Quinine Anesthesia."

The two papers were discussed by Drs. J. G. Sheldon, E. A. Burkhardt and the Chairman, Dr. A. E. Hertzler of Kansas City; Drs. W. A. Shelton and Elmer Twyman closing.

The paper of Dr. Given Campbell of St. Louis was then read by the author, the title being "The Treatment of Migraine." Dr. Campbell's paper was discussed by Dr. G. Wilse Robinson of Kansas City, Dr. S. A. Johnson, of Springfield, Dr. C. R. Woodson of St. Joseph, Dr. H. R. Lucas of Joplin, Dr. W. G. Moore of St. Louis, Dr. W. T. Coughlin of St. Louis, Dr. D. S. Booth of St. Louis and Dr. Given Campbell in closing.

The paper of Dr. Walter Fischel of St. Louis, on "The Value of the Von Pirquet Test in the Diagnosis and Prognosis of Pulmonary Tuberculosis in Adults," was read by title.

Dr. Jackson B. Taulbee of Joplin, Chairman of the Committee of Arrangements, then announced the play to be presented by the members of the Jackson County Medical Society and the reception and dance for visiting members of the Association to be given that night.

A paper on "Surgery of the Heart," illustrated by lantern slides was read by Dr. Walter C. G. Kirchner of St. Louis.

Dr. Franklin P. Johnson of Columbia then presented a paper with lantern slide illustrations entitled "A Young Human Embryo."

The President gave permission to Dr. O. H. Brown of St. Louis to make a short presentation of the paper of Dr. W. H. Luedde of St. Louis on "The Giant Magnet in General Practice."

The meeting adjourned at 5:15 p. m.

Wednesday, May 13, 1914—Evening Session

The exercises for the evening consisted of the presentation of the first act of Mr. George Bernard Shaw's play, "The Doctor's Dilemma," produced by members of the Jackson County Medical Society.

Dr. Jabez N. Jackson of Kansas City gave a short account of the first production of the act in Kansas

City in April. He stated that the gentlemen taking part in the play had produced it under the auspices of the Kansas City Medical Library, at which time it was so well received that the lesson conveyed in the lines had been productive of much good toward eradicating some of the evils existing in medical practice.

At the conclusion of Dr. Jackson's remarks the curtain rose and the act was produced. The theater was well filled with a representative audience of physicians and citizens, there being about 1,000 people present.

The program follows:

"The Doctor's Dilemma"

A satirical farce by George Bernard Shaw.

Produced and staged under the direction of Mr. Marcus Ford.

DRAMATIS PERSONAE

(In the order of their appearance.)

Redpenny, assistant to Sir Colenso Ridgeon.....
.....Dr. Edwin H. Schorer
Emmy, serving woman to Sir Colenso Ridgeon...
.....Dr. W. L. McBride
Sir Colenso Ridgeon, who has just been Knighted.
.....Dr. Logan Clendenning
Dr. Shoemaker, an old college mate of Sir Colenso
.....Dr. H. P. Kuhn
Sir Patrick Cullen, an old English doctor.....
.....Dr. Carl Bryant
Sir Cutler Walpole, a surgeon...Dr. E. H. Skinner
Sir Ralph Bloomfield Bonnington, an eminent
internist.....Dr. W. S. Sutton
Dr. Blenkinsop, a physician in the London tene-
ments.....Dr. V. W. McCarty
Mrs. Dubedat, who consults Sir Colenso regarding
her husband.....Dr. E. H. Schorer

The scene takes place in the consultation room of Sir Colenso Ridgeon, who has just been Knighted by the King, in the year 1903.

There are five acts in "The Doctor's Dilemma," but only the first act was staged, as this introduces the medical characters. The other four acts round out the humor of the farce.

" 'Tis a bitter pill—but good physic."

This act from Mr. Shaw's satirical fling at the medical profession was staged and produced in Kansas City, on April 22, for the entertainment of the members and guests of Jackson County Medical Society, the cast being composed entirely of members of that society.

The clever lines of the book, which the hearers were so well qualified to appreciate, were admirably set forth by the actors.

By special request of the Program Committee the act is repeated for the entertainment of the members and their friends attending this session of the Association.

Thursday, May 14, 1914—Morning Session

The meeting was called to order at 9:20 a. m. by Dr. C. H. Neilson of St. Louis, First Vice-President of the Association.

The paper of Dr. Fred T. Murphy of St. Louis on "The Application of Recent Experimental Work in the Treatment of Intestinal Obstruction," and the paper of Dr. Edward H. Skinner of Kansas City on "Roentgenoscopy in the Right Lower Quadrant of the Abdomen," with lantern slide illustrations, were read by title, both gentlemen being prevented from attendance.

Dr. Orville H. Brown of St. Louis then read a paper on "Asthma."

The paper of Dr. Ralph L. Thompson of St. Louis on "Unnecessary Poisonings" was read by title.

Dr. Frank J. Lutz of St. Louis then read a paper on "What Knowledge Shall be Imparted to the Laity Concerning Cancer." Discussion by Dr. Walter B. Dorsett of St. Louis, Dr. W. F. Morrow of Kansas City, Dr. W. G. Moore of St. Louis, Dr. W. H. Lanyon of Joplin, Dr. Tinsley Brown of Hamilton and Dr. F. H. Brown of Billings.

The President announced that the time, according to the By-Laws, for election of officers had arrived and stated that the election had been proceeded with in the House of Delegates according to the recently adopted amendment to the By-Laws. He then requested the Secretary to read the minutes of the House of Delegates.

The Secretary reported as follows:

The House of Delegates amended the Constitution and By-Laws so that the officers shall be elected by the House of Delegates; this, in order that the scientific work may be participated in by all members, including the Delegates. The House also ordered that the House of Delegates shall complete its labors on the first day of the annual session and remain in continuous session until its labors have been completed. In accordance with this amendment, the following officers have been elected: President, Dr. H. C. Shuttee, West Plains; Vice-Presidents, Dr. James A. McComb, Lebanon, Dr. T. A. Coffelt, Springfield, Dr. G. O. Cuppage, Moberly, Dr. W. A. Clark, Jefferson City, Dr. William G. Estill, Lawson; Delegates to the American Medical Association, Dr. E. H. Miller of Liberty, Dr. A. W. McAlester, Jr., of Kansas City, Dr. H. L. Reid of Charleston.

An amendment to the By-Laws on defense was adopted, as proposed by the Defense Committee, providing that the Defense Committee shall not expend more than \$100 for assistance in malpractice suits in any one case for any one member, and \$1,500 was appropriated out of the general fund to the defense fund. Another amendment was adopted eliminating the orations on medicine and surgery. St. Joseph was chosen as the next place of meeting.

The President then appointed Dr. W. S. Allee of Olean, Dr. A. F. Koetter of St. Louis and Dr. Spence Redman of Platte City to conduct the newly elected President to the rostrum. Dr. Allee presented Dr. Shuttee to the President with the following words:

Mr. President:—We are glad to introduce to you our President-Elect, Dr. H. C. Shuttee, and will ask that you introduce him to the members of this Association.

Dr. Miller then addressed the Association as follows:

Members of the Missouri State Medical Association:—I thank you for all the courtesy you have extended to me during my term and the universal aid that you have contributed to make such a successful meeting for this year. In presenting your next President with the gavel, I turn over the office to a man who needs no introduction, a wheelhorse, as it were, in the work, and I feel sure when I turn it over to him that your affairs are in better hands than in those of your retiring President. I take great pleasure in introducing to you Dr. H. C. Shuttee of West Plains, Howell County, as the next President of the Missouri State Medical Association.

Dr. Shuttee made the following remarks.

Mr. President and Gentlemen of the Missouri State Medical Association:—I am sure you will not expect me to make a speech. You know there are occasions when a man is too full for utterance and this is one of them. I could not make a speech now if I tried, but I want to thank you very sincerely and earnestly for the honor you have conferred on me, and especially for the honor that you have conferred on that great body of physicians outside the medical centers and the

larger cities, known as the country doctors. I feel my own weakness and incompetence to preside over a body of such intelligent men as compose the Missouri State Medical Association. I will make you every promise, however, to do the very best that I possibly can and I am sure that I will have the hearty and earnest help and assistance of every member of the Association.

Dr. Shuttee then announced the next paper on the program, "The Medical Quack," by Dr. Emmet Kane of St. Louis, which was read by the author and discussed by Dr. C. K. Wiles of Kansas City, Dr. J. B. Taulbee of Joplin, Dr. T. G. Hetherlin of Louisiana, Dr. Robert E. Schlueter of St. Louis and Dr. W. F. Morrow of Kansas City. Dr. Kane closed the discussion.

The President then transmitted to the members the invitation of the Jasper County Medical Society for the visiting members to take an automobile trip about the city, following the conclusion of the afternoon session.

Dr. D. F. Manning of Marshall then read a paper on "Auto-Intoxication and Its Relation to Intestinal Indigestion."

The meeting then adjourned at 12:10 p. m.

Thursday, May 14, 1914—Afternoon Session

The meeting was called to order by the President, Dr. H. C. Shuttee, at 1:30 p. m.

The paper of Dr. J. G. Sheldon of Kansas City on "Some Factors in Surgery of the Stomach and Duodenum," was read by title.

Dr. Rudolph Buhman of St. Louis then read a paper on "Cancer and Precancerous Lesions of the Skin," illustrated by lantern slides. No discussion.

Dr. Franklin E. Murphy of Kansas City presented the following resolution:

WHEREAS, No locality is wholly safe from the ravages of the communicable disease, tuberculosis; and special problems are presented by densely populated, manufacturing and mining districts with their floating population, many of which are indifferent to the lessons taught by statistical facts pertaining to the disease and of their own particular dangers to which their attention has been drawn by various means, therefore be it

Resolved, That the Missouri State Medical Association views with satisfaction the establishment throughout this and other states of an increasing number of associations for the study and prevention of tuberculosis and the earnestness of their beneficent work; and we wish to record that this Association stands ever ready to aid all such organizations in movements to conserve the public health.

FRANKLIN E. MURPHY, Chairman.
C. C. CUMMINGS,
A. E. MONROE.

The President then asked the pleasure of the meeting. Dr. W. S. Allee of Olean moved the adoption of the resolution. This was seconded and carried.

Dr. W. E. Leighton of St. Louis followed with a paper on "Drainage in General Peritonitis."

The paper of Dr. Bernice B. Barr of Clinton on "Some Pathological Phases of Development" was read by title.

Dr. F. M. Barnes of St. Louis then read a paper on "Psychoses Associated with Tabes." Discussed by Dr. C. R. Woodson of St. Joseph, Dr. M. A. Bliss of St. Louis, Dr. H. Unterberg of St. Louis and Dr. F. M. Barnes in closing.

A paper on "The Perversions of Consciousness in Mental Diseases" was then read by Dr. S. A. Johnson of Springfield and discussed by Dr. F. M. Barnes of St. Louis, Dr. H. Unterberg of St. Louis and Dr. C. R. Woodson of St. Joseph; Dr. S. A. Johnson closing.

The paper of Dr. William R. Patterson of Warrensburg on "Treatment of Neurasthenia" and the paper of Dr. G. Wilse Robinson of Kansas City on "The Treatment of Neuralgia" were read by title.

The meeting adjourned, at 3:45 p. m., *sine die*.

SECRETARY'S ANNUAL REPORT

May 12, 1914

The paid-up membership for 1914 is 2,474. The increase in the state assessment from \$2 to \$3 has not occasioned the loss of any member; a large increase in the dues to the St. Louis Medical Society, however, caused a few members to resign from that body.

During the past twelve months I have visited 17 counties. Three counties were organized: Wright, Lafayette and Hickory. An effort was made to organize Douglass County, but the members did not complete the process started when Dr. J. H. Elliott, the Councilor of the District, and your Secretary visited the county.

An effort was made to hyphenate Lincoln County with Pike County, but two visits by your Secretary, one with Dr. L. W. Cape, Councilor of the district, failed to bring out any of the doctors from Lincoln County.

Lafayette County was organized June 3 with 32 members. The charter of this Society was revoked at the last annual session, but the doctors made a request for immediate formation of a new Society, which was accomplished without difficulty, although it was necessary to explain the inconsistencies of certain misunderstandings in regard to sectarianism. There is now a good working body in Lafayette County.

Wright County was organized on August 5 with the assistance of Dr. J. H. Elliott, Councilor of the district, and your Secretary, with 9 new members and 1 transfer from an adjoining county. They now have 15 members and are among the most active of the County Societies.

Hickory County was organized on August 12 through the effective efforts of Dr. R. C. Nevins, of Wheatland. The county is somewhat isolated and the charter members did not require the presence of the Councilor of the district nor of your Secretary. They organized with 8 members and have lost one by death.

In one county there arose some misunderstanding in regard to the eligibility of physicians who were members of sectarian societies, it having been represented to them in the early days of the reorganization that the Association had removed all restrictions against graduates of sectarian schools and would permit our members to retain membership in sectarian societies also. A visit to the Society resulted in a clear understanding of the By-Laws on this subject, but at my suggestion the question was referred to the Judicial Council at this session.

In another county a question arose as to the eligibility of an applicant who was not acceptable to another County Society where he had always lived. I refused to accept his state assessment and reported the matter to the Executive Committee, who approved my action. The applicant consulted an attorney, who informed us that he had advised suit to mandamus the Association to compel us to admit the applicant to State membership. The suit was not filed. The applicant had misrepresented the conditions existing in the county from which he moved and therefore the Society felt it had been unjustly discriminated against by the Secretary and the Executive Committee. A visit by me at their request cleared the situation effectively and the Society is now one of the best working bodies in the state. The applicant, I might say in passing, soon returned to his original location, but without a transfer of membership.

In another county trouble was averted when your Secretary instructed a County Society to return the dues of an applicant for refusing to sign the pledge that he would not affiliate with sectarian societies, he being a graduate of a sectarian college. He soon showed his true colors by becoming very prominent in "newspaper practice."

Another county recently adopted resolutions to have the By-Laws of the State Association amended so as

to permit sectarian practitioners to hold membership in sectarian societies and in our Association. It may be this proposition will be put before the House of Delegates at this session.

The County Societies have continued their efforts to eradicate the quack and illegal practitioners and with increasing success. Some members in Princeton, Mercer County, succeeded in preventing the "United Doctors" from opening their offices. The members had the hearty cooperation of Judge R. W. Steckman, prosecuting attorney, who interviewed the "noted specialist" before he began operations on the pocket-books of his victims, with the result that he took the next train out of the city.

In Dexter, Stoddard County, the "United Doctors" were billed to appear, but on arrival he was arrested (there was only one of them) at the instigation of some of our members, and on trial was fined \$50. He languished in jail four days before he could obtain funds to pay his fine and make his exit. Nobody was hurt in either instance. In both of these cases your Secretary was appealed to for information on the steps that should be taken to prevent operations by the "United Doctors," which he furnished with the result as stated.

The first attempt to prosecute an optometrist for practicing medicine without a license was instituted by Greene County Medical Society in Springfield. The man was permitted to leave the state after acknowledging his guilt. The Optometry Association made frantic efforts to prevent such an outcome, a fact that was not known until after the agreement to permit the optometrist to leave town had been made. Greene County Society also successfully prosecuted a chiropractor. These actions were fully reported in the JOURNAL.

It is likely that other prosecutions of illegal practitioners occurred in some counties that did not come to my notice.

The increase in the State assessment, other than causing a flood of letters of inquiry, had, as already mentioned, no perceptible effect on the membership.

The spirit of organization is stronger to-day than at any time since the reorganization in 1903. The past year has demonstrated to a large number of members who have had occasion to call on the Association for assistance, that the organization exerts a tremendous influence for the protection and benefit of the individual member. On the other hand, members are showing a readier spirit to fulfil their obligations to the Association.

It is evident that many members do not yet clearly understand the restriction against admitting sectarian practitioners to our Association. It will be necessary, therefore, to enlighten our members more definitely on this point and show them that in supporting sectarianism through membership in sectarian societies they violate the letter and spirit of our Constitution and By-Laws. I am sure we will experience no difficulty in doing this and the subject is mentioned here because it has become a matter of discussion only in the past two or three months.

I would again direct attention to the very great importance of regular meetings of Societies. I find in every instance that those Societies which hold regular meetings are powerful influences for good in their counties and among the members. On the contrary, those counties which hold few or no meetings are torn and rent with internal dissension and exert little or no influence in community affairs. Members of the House of Delegates should put forth every effort to maintain good working Societies in their counties.

During the year 297 new members were admitted, 11 reinstated, 15 resigned, 66 transferred or moved out of the state, 65 dropped for non-payment of dues, 38 died. The total membership is 3,092.

E. J. GOODWIN, *Secretary.*

TREASURER'S REPORT

GENERAL FUND

RECEIPTS

1913			
May 14	To balance on hand.....	\$3,736.27	
1914			
May 1	By advertising in THE JOURNAL	2,664.26	
	By assessments of County Societies	8,243.00	
	By interest on daily balance	48.46	
		<u>\$14,691.99</u>	
	To disbursements	\$9,295.51	
	Balance on hand.....		\$5,396.48

DEFENSE FUND

RECEIPTS

1913			
May 14	Balance on hand.....	\$2,783.29	
May 20	Transferred from General Fund	750.00	
1914			
May 1	Interest on daily balance	50.01	
		<u>\$3,583.30</u>	
	To disbursements	1,800.01	
May 1	To balance on hand.....		\$1,783.29

J. FRANKLIN WELCH,
Treasurer.

REPORT OF PUBLICATION COMMITTEE

The committee has continued its strict supervision of advertising matter appearing in the JOURNAL and therefore have been compelled to refuse a number of advertisements because they did not meet our requirements.

There has been an increase in the number of articles sent to the JOURNAL for publication by members, and a corresponding increase in the number of pages printed.

The American Medical Association completed the arrangement started last year to establish a cooperative advertising bureau, with headquarters at Chicago, whose function is to assist the State Journals in their advertising department. The Editor of our JOURNAL is a member of the committee of the A. M. A. having in charge this advertising bureau. Through the work of this bureau there has been added several pages of advertising, although the bureau has been at work only a short time. The bureau has been very influential in correcting erroneous notions concerning the value of State Journals to advertisers, and in this respect we expect the bureau to be far more influential in the future.

The committee desires to express its grateful appreciation to the members for their interest in the JOURNAL. We wish to impress on all members the fact that the success of our JOURNAL depends entirely on individual members, and we therefore urge that they give its patrons their support on all occasions that offer, and let the advertisers know that they do so. In this way only does the advertiser learn that the money he spends with us is returning *quid pro quo*.

The financial account of the JOURNAL shows \$121 increase in the printing and \$14 increase in the postage and \$6 increase in the freight and hauling, or \$141 increase in expenses, and a decrease in the advertising receipts of \$104; a total loss of \$245, but in spite of all this the JOURNAL earned \$633 more than it cost to pro-

duce it. The explanation of the reduced income is that we have refused to accept new advertising which did not conform to our principles and have eliminated some advertisements that were carried last year, to which objections developed.

With a more general support of the JOURNAL by the individual members, particularly support of the advertising department, we believe the gain in the JOURNAL will be increased very materially. The JOURNAL is in reality one of the best assets the Association possesses, but it has not in the past received the attention from the members which its importance deserves.

FINANCIAL STATEMENT

By advertising acct. May 1, 1913, to April 30, 1914.....	\$3,293.09	
To printing of twelve issues, May 1913, to April 30, 1914.....	\$2,129.52	
Freight and hauling.....	149.11	
Postage.....	380.99	2,659.62
Net gain.....		\$ 633.47

S. P. CHILD,
M. A. BLISS,
W. H. BREUER, *Chairman,*
The Committee.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION

When your committee began to gather material for this report we learned, through the courtesy of the Secretary of the State Board of Health, that there were at that time "six medical colleges teaching medi-

The following tables show the attendance at the various colleges, with the number of bodies furnished to each school; the number of graduates applying for license before state boards and the percentage of failures before those boards. For purposes of comparison the figures for some of the previous years are given.

The figures for the last three years successively are significant. The number of graduates of regular medical schools in Missouri who acquired licenses are 993, 846 and 572; in the irregular schools the figures are 863, 826 and 826. In other words, the advance in medical education and the increasing rigidity of examinations in the case of graduates of regular medicine have resulted in cutting down the number of regular graduates in this state within the last three years to 42.4 per cent. In the irregular schools the falling off is only 4.4 per cent. and the figures for the last two years are stationary. It does not seem to be necessary to analyze the reasons for this state of affairs at present, but it does seem time to bring the facts to the attention of thinking people, especially those who have the responsibility of making and enforcing laws regulating the medical profession.

In the case of the St. Louis University School of Medicine and the Washington University Medical School, bodies are used by the dental department of these two schools. It is difficult to make an accurate calculation of the number of bodies used by medical students, but the conclusion seems warranted that the medical students use a larger proportion of bodies than do dental students.

It is a suggestive fact that the proportion of bodies is less in schools showing poorer preparation, as demonstrated by the state board examinations, and it is also instructive that in the case of an irregular school

TABLE 1.—ATTENDANCE WITH NUMBER OF BODIES SUPPLIED BY THE ANATOMICAL BOARD

	1911-1912		1912-1913		1913-1914	
	Atten.	Bodies	Atten.	Bodies	Atten.	Bodies
National University of Arts and Sciences, St. Louis.....	208	...	190	71	...	..
College of Physicians and Surgeons, St. Louis.....	35	7	77	11	45	6
St. Louis University School of Medicine, St. Louis.....	293	...	253	..	237	..
St. Louis University Dental School, St. Louis.....	148	108	180	77	234	67
Washington University Medical School, St. Louis.....	110	..	68	..	57	..
Washington University Dental School.....	183	59	100	40	110	38
University Medical College, Kansas City.....	66	6	54	2	..	..
Eclectic Medical College, Kansas City.....	50	4	50	4	50	1
Hahnemann Medical College, Kansas City.....	39	5	41	6	53	4
Central College of Osteopathy, Kansas City.....	42	5	35	2	40	1
Ensworth Medical College, St. Joseph.....	44	11	20	4	..	0
University of Missouri Medical College, Columbia.....	44	16	54	12	68	12
American School of Osteopathy, Kirksville.....	627	38	668	23	665	34
Weltmer Institute, Nevada, Mo.....	104	1	32	0	18	1
American Medical College, St. Louis.....	237	38	190	79	233	28
Barnes Medical College, St. Louis.....	...	...	...	..	...	..

cine in Missouri that are recognized by the State Board of Health. Four of these are in St. Louis: Washington University Medical School, St. Louis University School of Medicine, Barnes Medical College and the College of Physicians and Surgeons. Ensworth Medical College is recognized, but will close its doors to students at the close of the present term." The Eclectic Medical College of Kansas City is not recognized by the State Board of Health. The University Medical College of Kansas City closed its doors nearly a year ago. This institution was very well equipped and had good teachers, but claimed to be running at a loss and could not afford to keep the school equipped and pay teachers in the scientific branches. The Ensworth Medical College of St. Joseph is closing for practically the same reason. The American Medical College was taken over by the Barnes Medical College a little more than a year ago. The school is running in the Barnes building under the name of the National University of Arts and Sciences.

making extravagant claims of anatomical skill and knowledge, the proportion of bodies used is extremely small.

The results of examinations before state boards show the same conditions as have been pointed out in previous reports by this committee. Some of the schools enable graduates to pass state boards and acquire licenses in large proportion. In other schools candidates fail to a degree that cannot be too strongly emphasized, varying from over 25 to over 50 per cent. Several conclusions follow from this. In the first place the examinations of none of the state boards can be said to be unduly severe, so that the continued failure to prepare men for such examinations would seem to indicate the need of more drastic action by state boards than has been the case. It would be interesting to find out what becomes of the rejected candidates. If they return to school in order to secure a better preparation the situation is disagreeable only to

themselves, but if they apply to other and easier state boards and eventually secure license to practice medicine without further preparation, the effect on the profession and the public cannot but be disastrous.

The committee would like to emphasize again the disproportion between the number of regular students and those of irregular medical colleges. It seems as if this situation should be more emphatically presented to the public than it ever has been. There probably is still an idea that the irregular schools teach principles that may be admired by a certain proportion of the population. As a matter of fact it is difficult to see much principle other than the desire to prepare for practice a large number of medical practitioners. Such schools, Dr. N. P. Colwell says, "are deplorably lacking in everything that goes to make up a medical school. They do not require a proper secondary school education; they do not insist on a four-year course; they lack to a great extent expert instructors; the laboratory courses are usually inadequate and the laboratory equipment likewise." In other words, they do not provide training such as a medical practitioner is supposed to have, and yet the present law practically puts them on a plane with well educated medical graduates.

GEORGE DOCK, *Chairman.*

TABLE 2.—RESULTS OF STATE BOARD EXAMINATIONS

	1910		1911		1912		1913	
	No. ex.	Per Cent. Failures	No. ex.	Per Cent. Failures	No. ex.	Per Cent. Failures	No. ex.	Per Cent. Failures
National University of Arts and Sciences, St. Louis.....	..	....	..	....	..	....	..	....
College of Physicians and Surgeons, St. Louis.....	42	0.0	64	4.7	77	2.6	85	3.5
St. Louis University School of Medicine, St. Louis.....	..	..	64	4.7	77	2.5	85	3.5
Washington University Medical School, St. Louis.....	48	0.0	45	4.4	47	0.0	45	0.0
University Medical College, Kansas City	19	15.8	35	20.0	34	17.6	..	....
Eclectic Medical College, Kansas City.....	..	..	13	30.8	11	0.0	15	26.7
Hahnemann Medical College, Kansas City.....	4	0.0	13	15.4	12	25.0	10	0.0
Central College of Osteopathy, Kansas City.....	..	..	..	..	..	..	..	..
Ensworth Medical College, St. Joseph.....	10	30.0	15	33.3	7	42.9	17	29.4
University of Missouri Medical School Columbia.....	..	..	..	..	..	..	..	..
American School of Osteopathy, Kirksville.....	..	..	..	..	..	..	..	..
Weltmer Institute, Nevada, Mo.....	..	..	..	..	..	..	..	..
American Medical College, St. Louis .....	..	..	10	20.0	53	28.3	89	32.6
Barnes Medical College, St. Louis .....	..	..	50	23.5	..	..	..	..

Of the other 25, we assumed the entire legal cost in 9. In 6 we agreed, for one reason or another, to pay only part of the legal fee. In one case the services for which the member was sued antedated his membership; he was therefore given every assistance except the payment of the attorney's fee and court costs. One case is too recent for classification. The other 8 cases had the protection of a regular insurance company which provided a good lawyer. These, however, accepted the advice and the experts provided by the committee.

Of these 25 cases, 16 have terminated as follows:

Verdict rendered against the defendant.....	2
Mistrial; case set for the next term of court.....	1
Compromised	2
Verdict for defendant or dismissal by the court..	11
-----	16
Cases still pending	9
-----	25
Total	25

It is practically impossible to ascertain the total number of threats and suits for malpractice that were directed against our members during the year. Those

REPORT OF THE DEFENSE COMMITTEE

Immediately after the last annual meeting of the Association we arranged for the transfer of all the records and other papers of the Defense Committee to the office of the Association, 3525 Pine Street, St. Louis. The Secretary, Dr. Goodwin, placed at our disposal one of the large drawers in the filing cabinet. This filing system and its location, as well as the services of the secretary and his assistant, have been of great assistance to us and have also added to the efficiency of the committee.

During the year we have held numerous meetings, all of which took place at the Association headquarters. At these meetings we had the valuable counsel of Dr. F. J. Lutz, Chairman of the Judicial Council; Dr. E. J. Goodwin, secretary; Dr. R. M. Funkhouser, Ex-President, and Dr. L. W. Cape, Councilor for the Eighth District. We feel deeply grateful to these gentlemen.

This committee has handled 32 cases. Two of these were almost entirely disposed of by the previous committee and the payment of the bills only was left to us. To one member aid was denied because of his delinquency. Another was refused because the services for which malpractice was alleged were rendered in contract practice, which is in violation of the laws of our Association. Three cases were threatened suits.

tabulated above are only those which have applied to the committee.

FINANCIAL STATEMENT

RECEIPTS

May 17, 1913. Balance on hand....	\$2,783.29	
May 17, 1913. Transferred from		
General Fund.....	750.00	\$3,533.29

EXPENDITURES

Attorneys' fees and court costs....	\$1,711.45	
Expenses of experts and other fees..	89.56	1,801.01

Balance on hand May 1, 1914.. 1,732.28

It is clearly evident from the history of malpractice suits against physicians, and this fact is recognized by those corporations who make a business of insuring doctors against liability in actions of this kind, that membership in the organized profession very materially lessens the chances of losing a suit for malpractice. The best men of the profession are members. Only a few good men do not belong. The average man belonging is of a much higher type than the average man outside the organization. Rubbing elbows with one's colleagues and frequently meeting with the members of the profession make for personal better-

ment and must improve professional attainments. The testimony of experts is often of great assistance to the defendant in a malpractice suit. The best expert testimony, everything else being equal, is given by those men who are best informed and know the most about their special branch. Here it may easily be seen that the greater a man's knowledge the more liberal are his views. A person with a limited amount of information in a given subject is of necessity narrow and sometimes prejudiced. Nowhere is this more evident than on the witness stand where the questioning and cross-questioning are apt to elicit conflicting statements from him who is not thoroughly acquainted with all phases of the subject.

Our members, by reason of their membership, have a wider acquaintance among the members of the profession. Some are able to choose good experts, while others do not personally know the men who are best informed along special lines. The Defense Committee can select experts for the latter class, and may also make valuable suggestions to the former. Herein lies the greatest value of this committee. In one case the experts originally selected by the lawyers who were defending one of our members, were replaced by others who were not personally acquainted with the defendant. Their prompt and definite answers during the trial were responsible for the decisive verdict which the jury returned, and which held the defendant blameless of the charge alleged against him. The number of applications for similar advice is increasing.

On the other hand, there are a few members who have directly or indirectly instigated demands against their confreres. Some have assisted the plaintiff or his attorney in the courtroom and outside of it. Be this because of personal friendship or that a fee depended on the outcome, these Janus-faced members of our Association should be disciplined. Such individuals are not themselves immune to demands in connection with alleged malpractice; and should they be compelled to defend such a suit, ought they then be entitled to assistance from those whom they have attacked in this manner? Certainly not! But as members they have a right to call on the Defense Committee, and they will undoubtedly do so when occasion requires it. This committee respectfully requests that this matter be referred to the Judicial Council.

While we are standing by our members, it must under no circumstances be assumed that we are of the opinion that one of our members cannot make a mistake or be guilty of neglect which proves disastrous to a patient, and for which the doctor is liable. This committee did not meet with such a case, but there have been a few instances of this kind. On the other hand, there have been a multitude of unjust demands, and there have been also some erroneous decisions rendered against doctors. To minimize this form of injustice should be our special aim.

We have usually placed each Councilor in direct charge of all those cases occurring in his district. Although some of the Councilors have served us exceptionally well, all have done good work. To those who have been called on we express our appreciation for their assistance. Most extraordinary and meritorious was the work of the late Dr. A. H. Madry, of Aurora, who departed this life while Councilor of the 28th District. Always prompt and willing, he served this committee and the Association even when he was quite weak from the chronic ailment which eventually took him away. We now express our deep regret that he was taken from us and ask that the Association record its appreciation of the splendid work done by Dr. Madry.

Especially noteworthy is the uniform willingness with which many of the best and busiest men of the profession sacrificed their valuable time in the interest of

those members who were in need of expert testimony. To each one of these the committee expresses its thanks and appreciation, for success really depended on them in almost every case.

We have proposed to the Committee on Revision of Constitution and By-Laws that Section 5 be amended to read as follows:

"Sec. 5. The Defense Committee shall consist of three members who shall, on request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against members 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 from the date of 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 enrollment 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 as defined above.

(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 the 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 forwarded immediately 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, nor shall it pay in whole or in part any damages agreed on 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."

Should this amendment be adopted without material change we beg to request that \$1,500 be added to the Defense Fund at this meeting.

R. EMMET KANE,
W. B. DORSETT,
R. E. SCHLUETER, *Chairman,*
The Committee.

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

The committee's work is represented in the program which is before you.

It will be noted that scientific sessions have been provided for each day of the session and the House of Delegates given a full day on Tuesday. If the amendment to the Constitution providing for the election of the President and the Orators by the House of

Delegates is adopted, then the morning of the third day of the meeting will be what it should be—one of the best sessions of the scientific program. In the past the scientific work on the third day has been seriously disarranged at almost every meeting, and sometimes practically abandoned.

We have tried to arrange the papers so that each paper may be read in full and yet allow ample time for the discussion. Your committee points with special emphasis to the entertainment provided on Wednesday evening, when the first act of George Bernard Shaw's play, "The Doctor's Dilemma," will be produced by members of the Jackson County Medical Society.

R. T. SLOAN,
M. B. CLOPTON,
E. J. GOODWIN, *Chairman,*
The Committee.

COMMITTEE ON CONSTITUTION AND BY-LAWS

Your committee on Revision of Constitution and By-Laws recommends the following changes:

Amend Chapter VIII, Section 5, by striking out all paragraphs (a) to (c) inclusive, and substitute therefor the following:

Sec. 5. The Defense Committee shall consist of three members who shall, on request and in compliance with the conditions hereinafter named, aid in the defense of suits for alleged malpractice instituted or threatened against members of the Association.

CONDITIONS

(a) Any member whose annual dues have been received by the Secretary of this Association 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 this Association.

(b) Any member whose annual dues have not been received on or before April 1, shall be delinquent from the first day of January 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 enrollment 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 on 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 one case shall the cost to this Association be in excess of \$100 for all such services. The Association does not obligate itself nor shall it pay in whole or in part any damages agreed on 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 sanitarium 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.

Amend Article IV, Section of the Constitution entitled "Members," by inserting after the word "be" in the second line the words "such of," and after the last word of the section add the words "as shall be approved by this Association," so that the section shall read:

Article IV, Section 2, Members. The members of this Association shall be such of the members of the component County Societies as shall be approved by this Association.

A. B. MILLER,
SPENCE REDMAN,
T. O. KLINGNER, *Chairman,*
The Committee.

REPORT OF THE COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

This being a non-legislative year there is nothing to report concerning legislation.

There were sixteen public lectures on various topics delivered by our members. In all these the County Medical Society was made sponsor for the meetings under the direction of the State Medical Association.

Dr. Harriet H. Stevens represents the woman's committee of the A. M. A. on our committee and has taken charge of the public health lectures. She has obtained the cooperation of various woman's clubs and has systematized the work very satisfactorily. We have cooperated with the Committee on Conservation of Vision of the A. M. A. and lectures on this subject have been given in some of the counties by our members. The County Court of Knox County, through the solicitation of the Knox County Medical Society, appropriated \$50 for lecture work last year and has increased the appropriation to \$100 for this year.

The lectures at the State Fair were not successful in 1913 because of the lack of space in the buildings. We appeared before the State Board of Agriculture at their October meeting and presented our plans for the erection of a Sociologic Building which would be devoted wholly to public health work during the annual State Fair. The Board promised to ask the legislature for the necessary funds. It is proposed to have the buildings represent model high-school buildings, so that counties desiring to erect such structures will have a permanent model at the State Fair Grounds.

The prosecution of quacks and illegal practitioners by County Societies is becoming more frequent and with more success than in the past.

We desire to impress on members the necessity of standing together on all questions touching medical legislation. The consensus of opinion as expressed through conferences of the committees and by previous action of the Association, should be supported by every member, and none should express views on medical legislation without first ascertaining the attitude of the Association on such questions. When the committee sends for information or requests action during the coming legislative year, we hope you will respond promptly and with unanimity.

R. M. FUNKHOUSER,
A. W. McALESTER, JR.,
A. R. McCOMAS, *Chairman,*
The Committee.

REPORT OF THE COMMITTEE ON VACCINATION

In its effort to arrive at a conclusion as to the vacinal status of the state, your committee has had access to but few exact figures. A letter was addressed to the State Commissioner of Education in the hope that he

could furnish some data as to the school population. Unfortunately, he had no information on the subject. Letters addressed to the health authorities of St. Joseph, Springfield, Joplin, Jefferson City, Hannibal and a few other points have remained unanswered. Such information as we have was obtained from the Health Department of the City of St. Louis and through the invaluable assistance of the State Board of Health. At our request the board sent to the county health officers throughout the state the following letter:

*"Dear Doctor:—*The Missouri State Medical Association is desirous of ascertaining the vaccine status of the state, in order to determine the extent to which the people of the state enjoy immunity from small-pox by reason of having been vaccinated.

The State Board of Health requests that you aid this inquiry so far as you may be able to do, by giving the data suggested by the following:

1. Please state, as nearly as possible, the number of vaccinations done in your county within each of the past two years.
2. How many of these were, (a) Primary? (b) Secondary?
(NOTE.—By "Primary" is meant vaccinations done on persons having no scar from a previous vaccination; by "Secondary," those done on persons having such scar.)
3. Will you please classify such scars as "good" or "poor."
4. If no exact data on these points are available, please state approximately the proportion of vaccinated persons in your county."

There are in the state 114 counties, making, with the City of St. Louis, 115 divisions. Answers were received from 53, or a little less than half. Of these, 14 simply said that they had no information to give, leaving 39 furnishing more or less reliable, and with rare exceptions, at best rough approximations or estimates, based on general impressions. A critical review of such reports would be out of place, but even a casual survey of them, comparing reports as to the vaccinated proportion of the population, where these are only estimated, with reports based on actual figures, such as those from the cities of St. Louis and Nevada, together with such internal evidence as can be gathered from the answers received, breeds a strong impression that the estimates as to the vaccinal security of the population are in most instances far too high, and that the total number of vaccinated individuals in the state is really much smaller than might be deduced from the figures here given. Nevertheless the returns are not without value. In the first place, they furnish a notion as to what proportion of our people must be put down as unprotected, even if we accept the returns at their face value. Again, they supply a starting point from which the reader may form an individual estimate of the true condition. Further than that, they constitute what we hope may be a first step toward the collecting of more exact data; and lastly, they contain here and there bits of interesting information, some of which will be incorporated into the latter part of this report. Besides, it is hoped that the sending out of the letters of inquiry has served to stimulate an interest in this important matter among the health officers throughout the state and among the medical profession.

These 38 counties, with the City of St. Louis, aggregated in 1910 a population of 1,644,555. As the total population of the state, according to the census of that year, was 3,293,335, we have reports bearing on half

the population of the state. In the case of 3 counties, aggregating in 1910 a population of 34,807, the reports only refer to the school population. This leaves for the purpose of estimating the proportion of vaccinated persons to the total, a population of 1,609,748, divided into two groups, one mainly rural, represented by 34 counties aggregating in 1910 a population of 639,197; the other chiefly urban, namely, the City of St. Louis and Jackson County, with an aggregate population, according to that year's census, of 970,551 (nearly 1,000,000).

While no return was received from Jackson County as such, it is here included on the basis of an estimate of the status of Kansas City. The population of that city being taken at 248,381 and that of Jackson County at 283,522, shows that the population of the city in 1910 was 87.5 per cent. of that of the entire county. There should, therefore, be no great difference between the figures for the two, while it is safe to assume that the figures for the entire county would be, to say the least, no higher than those for the city. Dr. W. S. Wheeler, the Health Commissioner, estimates that 35 per cent. of the school population of Kansas City is vaccinated, and 50 per cent. of the entire population.

In a letter addressed to the Secretary of the State Board of Health he says: "The foreign population is better vaccinated than are the Americans. In fact, we have not had a case of small-pox existing among the foreign population in ten years. * * * As you are probably aware, this city is an unvaccinated one, consequently we have a large number of small-pox cases reported yearly."

The 35 counties and the City of St. Louis may be classified into four groups, according to the proportion of vaccinated persons to the whole population, taking the returns at their face value, to-wit: (1) 75 per cent. or over vaccinated; (2) about 50 per cent.; (3) about 25 per cent.; (4) less than 25 per cent. This does not constitute a continuous series, but the reports as given all come under one or another of these heads, as follows (population figures, those of 1910):

City of St. Louis, population.....	687,029
Ten counties, aggregate population.....	193,410
Total	880,439

or about 55 per cent. of the population reported on 75 per cent. vaccinated.

If, however, we eliminate the City of St. Louis and Jackson County, there remain reporting on this point 34 counties, aggregating a population of 639,197, viz.: Group (1).—The 10 counties in the 75 per cent. or more class aggregate 193,410, or about 30 per cent. of this figure. Group (2).—About 50 per cent., 13 counties, report a population about 50 per cent. vaccinated. Their aggregate population is 501,708, which is 31 per cent. of the total reporting on the vaccinal status. As Kansas City alone furnishes about one-half of the total of these 13 counties, in order to get the population for the rural districts we eliminate Jackson County, leaving 218,186, and compare it against the total, minus St. Louis City and Jackson County, which places the rural 50 per cent. vaccinated class at 34 per cent. of the rural total. Group (3).—About 25 per cent., 3 counties report about 25 per cent. vaccinated. Their aggregate population is 68,494, which is 4 per cent. of the total of 10.5 per cent. after eliminating the City of St. Louis and Jackson County. Group (4).—Less than 25 per cent., 9 counties report less than 25 per cent. vaccinated. Their inhabitants aggregate 159,107, which is 9 per cent. of the population, reporting proportional vaccinal protection, or 24.5 per cent., after eliminating the City of St. Louis and Jackson County.

Placing this in the form of a table we have:

Per Cent. Vaccinated	Pop., 1910	Per Cent. of Pop- ulation to To- tal Reported	
		Rural and Urban	Rural Only
City of St. Louis, about 75%.....	687,029		
10 counties, about 75%.....	193,410	55%	30%
Jackson County, about 50%.....	283,522		
12 counties, about 50%.....	218,186	31%	34%
3 counties, about 25%.....	68,494	4%	10.5%
9 counties, less than 25%.....	159,107	9%	24.5%
	1,609,748		

Of the rural population, therefore, less than one-third is 75 per cent. vaccinated, or better: about one-third, 50 per cent. vaccinated: about one-tenth, 25 per cent. vaccinated, and about one-quarter less than 25 per cent. The figures in the table being cast together would show that the rural population represented by the 34 counties is about 42 per cent. vaccinated. As before remarked, the true proportion of vaccinal protection is probably considerably lower than this.

VACCINAL STATUS OF SCHOOL POPULATION

In the City of St. Louis, 100 per cent. of the public school population is vaccinated, the long-established practice of the School Board of excluding unvaccinated children having been sustained by a recent decision of the Circuit Court. A large majority of the pupils in parochial and other private schools is similarly protected. In Kansas City, as above stated, the public school population is only about 35 per cent. vaccinated.

As to the rural school population, we have reports from 17 counties, 3 of them reporting on this point alone. These all disclose a truly lamentable condition. Its bearing on the whole question is evident when we note that according to the census of 1910 there were in the state 665,972 pupils attending school, which was a little over 20 per cent. of the total population. All the 17 counties placed the proportion of vaccinated school-children at under 25 per cent. One county reports "about 10 per cent. vaccinated"; one, 9 per cent.; one, "not 2 per cent."; one, "very few"; one, "no vaccination of schoolchildren."

The report sent from Vernon County by Dr. G. W. Petty deserves especial praise for its painstaking and exact character. A census of the public schools of the City of Nevada showed that of all pupils only 8 per cent. showed scars; of the high-school pupils, 39 per cent.; and of the teachers, 67 per cent.; the latter figure especially being a sad commentary on the benefits of "education." Total vaccinal protection of the community, about 25 or 30 per cent.

RECENT VACCINATION

As to the amounts of vaccinating recently done the reports are not encouraging. One health officer says: "Personally, I have not done six in two years." Four report: "No vaccination in last two years." Another, "Don't think I have vaccinated twelve in twelve years." Five report: "Very few in last two years." Another: "Vaccination for small-pox is nearly obsolete in this county, as people would rather have small-pox than vaccination." Another: "A good many cases of small-pox last winter, but few vaccinated, although urged." Another: "In past twenty years small-pox has been very mild, causing our people to lose interest in vaccination, and as no one urges it, none is done." Another: "Not a dozen vaccinations in last two years." Another: "Five in 1912 and 1913."

The City of St. Louis reports during the year, April 1, 1912, to March 31, 1913, 11,314 primary vaccinations and 2,647 secondary. For the year, April 1, 1913, to March 31, 1914, 19,911 primary and 7,577 secondary, done by city physicians. Of 1,700 small-pox exposures, 20.25 per cent. had no scar.

From 6 counties came reports of popular opposition to vaccination, several adding the comment that the prevailing type of small-pox is so mild that people would rather have it than be vaccinated. It is hardly necessary to say that the history of epidemics from the earliest times shows that a mild type of disease affords no guaranty against its severity in the near future.

Your committee, in closing, desires to make the following recommendations:

That this Association take action requesting county health officers to acquaint themselves as far as may be practicable with the vaccinal status of their respective counties; that it advocate the enactment of a law or regulation requiring physicians to report to the State Board of Health the number of vaccinations done by them, whether these were primary or secondary, and whether successful. Also that it urge the profession throughout the state to vaccinate as many as possible, and by word and example to bring all our people to a correct understanding of this important matter.

The possibilities of accomplishment in this direction are well shown by the latest figures from the German Empire, which we quote from the British L. G. B. Reports (New Series, No. 89):

"During the year 1913, up to the 13th December, upwards of eighty cases and one death were reported. Thirty-five of these occurred amongst foreigners and a large number of the remaining cases were notified in towns or districts bordering on foreign countries, and especially on Russia."

JOSEPH GRINDON, *Chairman*,
WILLIAM FRICK,
F. H. MATTHEWS,
The Committee.

REPORT OF THE COMMITTEE ON PREVENTION OF BLINDNESS

For the past few years there has been made annually a report to this body from its special committees on Prevention of Blindness, the committees being designated by several distinctive names. There have been two special reports on ophthalmia neonatorum and attention has been called to its prevalence, prevention, treatment, and the law on the statute books of Missouri relating thereto.

A Committee on Trachoma made a most excellent report at the Sedalia meeting. The committee's investigation led it to believe that there are no less than 10,000 cases of trachoma in Missouri. Your attention is called to this report which is contained in our JOURNAL of July, 1912.

Your committee indorses this report and recommendations of the Committee on Prevention of Blindness of the American Medical Association, especially a few of the recommendations relative to trachoma, which part of their report was prepared by Dr. Green, to-wit:

First: That trachoma be made a reportable disease to every local health officer.

Second: That the State Board of Health should require tabulation of all fresh cases of trachoma.

Third: That the local Board of Health and Health Commissioner should regard trachoma with the same concern as they regard scarlet fever. Trachoma may not be dangerous to life, but it is dangerous to that which is almost as precious as life itself—eyesight. The failure to recognize trachoma as a serious contagious disease is reprehensible.

Fourth: (The committee modifies this section from the original report to read as follows): Practitioners in the country should equip themselves to recognize incipient trachoma and to apply the simpler medical and surgical measures for its relief. Whenever pos-

sible, the patient even in the incipient stage should be referred to an oculist; while trachoma with complications, e. g., pannus, ulcer, entropion, iritis, etc., should be treated by an oculist.

The Committee on Prevention of Blindness of the American Medical Association has adopted a nationwide campaign for the prevention of blindness and is working practically independent of local committees. Dr. Loeb has charge of this campaign in Missouri. He has arranged with more or less success several public meetings at which lectures on the conservation of vision have been given by members of this Association. It is very difficult to reach any number of people through the medium of public meetings. This committee believes the most effective work can be done through the public press and recommends that authoritative articles be prepared by the committee on such subjects as trachoma, and that the Secretary of the Association furnish the newspapers of the state with copies with a request for publication. An article on ophthalmia neonatorum by Helen Keller was made a leading feature in the *Kansas City Star* recently. Miss Keller has given us several articles and the newspapers are enthusiastically presenting her contributions, to which the public pays the closest attention. We are informed that many papers would be glad to publish such articles. In that way the material would go to a much larger number of people than it is possible to reach or influence by personal talks, while the objection of personal advertising used against public speakers can be avoided.

Those who have a city practice are impressed with the large number of industrial accidents, especially those occurring in the steel- and iron-working industries. As steel, iron and concrete are entering more largely into our structural work and the number of employees is constantly on the increase, we find the employer putting forth much effort to decrease all accidents attending this industry.

At the Kansas City Bolt and Nut Company an employee is dismissed after the third accident if the employee is in any manner careless and neglects to avail himself of the safeguards furnished by the factory. Employers are finding it cheaper to furnish protection against accidents of all kinds than to pay for damaged eyes and limbs.

Our State Factory Inspector is constantly recommending protection glasses and screens to protect the eyes of those working at emery wheels, lathes, etc. The occupational disease law is the only law on our statute books bearing on this subject. However, the orders of the Factory Inspector that employees working at machinery dangerous to the eyesight be provided with suitable protection glasses, we are informed, are being readily complied with, so special legislation may not be necessary. We can with a great deal of assurance look to this office, the lay societies, and the movement for "Safety First," now nation-wide, to bring about ample protective measures to both employer and employee. The result of the campaign for the sane Fourth of July is only a demonstration of what, in a short time, may be effected in the industrial world. Some members of the committee have visited a number of factories, iron and steel works, machine shops, marble-cutter works, and in the places visited found all those working where flying particles can strike the eye protected either by glass, screens or protection glasses. In one of the factories where grinding was being done with an emery stone rotating at a very high speed, all flying particles were being carried off through a large suction tube, so that not even the dust accumulated in the factory; it being impossible for flying particles to strike the eye.

The one thing that this committee wishes to urge on this body is that steps be taken for medical inspection of rural schoolchildren, particularly so far as

the eyes are concerned. We regard it as the one immediately important work of this body and its endorsement is earnestly sought. Many a child is backward and many frequently leave school simply from lack of proper aid to their vision or proper medical attention. In cities where medical inspection has been adopted statistics are such that no layman would be willing ever to abolish it. Our rural schools need not only medical inspection as to vision, but general medical inspection, including the subject of sanitation, ventilation, etc.

Our State Superintendent of Public Instruction, Mr. W. P. Evans, is anxious to cooperate with this Association to establish general medical inspection of schoolchildren and expressed the hope that a suitable law would be drafted for introduction in the next legislature. It is therefore recommended by your committee that this body cooperate with the State Department of Education and seek the cooperation of the State Teachers' Association for the purpose of devising a plan for the medical inspection of rural schools, and that the President of the Association in person be requested to appear before the next annual meeting of the State Teachers' Association and urge their cooperation; and that a special committee be appointed to further this matter; and that the committee be selected by the Committee on Health and Public Instruction and be directly under this bureau of our Association; and, further, that a member of the committee be chosen from among the members who limit their practice to ophthalmology.

The committee, after canvassing the matter, is convinced that some standard of qualification should be fixed by this Association for those of its members who desire to enter the practice of ophthalmology. It is generally recognized as desirable that a man should enter surgery not by proclamation but by qualification. The newly formed American College of Surgeons may in a large measure govern, in time, the qualifications of those who desire to enter surgery as a specialty. The college may be able to control the qualifications of those entering other allied fields. We believe it is the duty of the Association to pass on the qualifications of any of its members who desire to enter fields of special practice.

It was no other body than this and affiliated associations the American Medical Association, which has fixed the requirements of the medical schools of this country, and it is just as logical for this body to fix the further requirements of its members entering on a specialty.

The committee, therefore, recommends that the House of Delegates appoint a committee to consider this matter in its immediate and its broader aspect and furnish to the House, at its next annual meeting, a general plan for bringing about the desired end.

REPORT OF THE COMMITTEE ON NECROLOGY

The committee has gathered data on all deceased physicians in Missouri, whether members or not, as far as they are able to do. The report presents a fairly accurate list of deaths in the profession since our last session.

Salathiel B. Ayers, M.D., Rush Medical College, 1866; a Confederate Veteran, local surgeon for the C. & A. Railroad at Louisiana, Mo.; died at his home in Louisiana, Feb. 24, 1914. Aged 75.

Henry Clay Beall, M.D., Missouri Medical College, St. Louis, 1880; a Confederate Veteran; for 24 years a practitioner of Carroll County, Mo., and ten years thereafter a resident of Cortez, Cal.; died at the home of his daughter in De Witte, Mo., Nov. 7, 1913, from pneumonia. Aged 70.

James H. P. Baker, M.D., Rush Medical College, 1868. A member of the Missouri Medical Association; once Vice-President of the same; local surgeon at Salisbury for the Wabash Railroad, formerly President of the Wabash Railroad Surgeons' Association; for many years a popular and successful practitioner of Salisbury; died at his home Dec. 20, 1913. Aged 76.

Zaphar Case, M.D., Washington University, St. Louis, 1875; fellow of A. M. A.; for forty years a practitioner of Johnson County, Mo.; died at his home in Warrensburg, Sept. 14, 1913. Aged 66.

Mark E. Crawford, M.D., Missouri Medical College, St. Louis, 1881; a member of the Missouri State Medical Association; died at his home in Camden, Mo., July 31, 1913, from cerebral hemorrhage. Aged 58.

Robert W. Campbell, M.D., Washington University, St. Louis, 1873; for forty years a practitioner at Bowling Green, Missouri, died at his home Oct. 7, 1913. Aged 68 years.

Dr. W. H. H. Crow (License, Missouri, 1883); a practitioner of Monroe County, Missouri, for 65 years; died at the home of his daughter in Kirksville, Mo., Sept. 20, 1913, from cerebral hemorrhage. Aged 89 years.

Dr. David T. Collier (License, Missouri, 1884); for more than fifty years a practitioner; died at his home in Licking, Jan. 4, 1914. Aged 77.

Wallace B. Deffenbaugh, M.D., Starling Medical College of Columbus, Ohio, 1885; member of the American Medical Association; Professor of Obstetrics in Ensworth Medical College, St. Joseph, Mo., for two terms; City Physician of St. Joseph, Mo.; died in his office July 2, 1913, from cerebral hemorrhage. Aged 53.

Everett L. Day, M.D., Barnes Medical College, 1906; died at his home in St. Louis, Aug. 29, 1913. Dr. Day served in the Hospital Corps of the U. S. Army in the Philippines during the Spanish American War, and was a prominent Mason. Aged 35.

George Fleet Dudley, M.D., Washington University, St. Louis, 1863; one of the founders and first President of the St. Louis Medical Society; first Health Commissioner of St. Louis; for two years Coroner of St. Louis County; a surgeon in the Confederate Army during the Civil War; died at his home in St. Louis, Feb. 2, 1914. Aged 79.

Dr. Jesse A. Eaton (License, Missouri, 1872, after twelve years of practice); died at his home in Belgrade, May 6, 1913. Aged 69.

John Early, M.D., Northwestern Medical College, St. Joseph, Mo., 1868; a Veteran of the Civil War, and a practitioner of Worth County for forty-five years; died at his home in Grant City, Mo., June 16, 1913. Aged 73.

William Henry Evans, M.D., Bellevue Hospital Medical College, 1867; a fellow of the American Medical Association of Sedalia, Mo.; assistant surgeon of the Eight Missouri Volunteer Infantry and Thirteenth Missouri Volunteer Cavalry throughout the Civil War; President of the Missouri State Medical Association in 1895; Coroner of Pettis County for several terms; died in Puntton Sanitarium, Kansas City, July 20, from heart disease. Aged 73.

Thomas Alvin Edwards, M.D., University of Louisville, Ky., 1881; formerly a member of the faculty of Beaumont Hospital Medical College, St. Louis; for ten years an invalid as the result of paralysis; died at his home in St. Louis, Dec. 22, 1913, from cerebral hemorrhage. Aged 57.

Burt L. Eastman, M.D., Chicago Medical College, 1892; a specialist in gynecology and abdominal surgery; died at his home in Kansas City, Mo., March 18, 1914. Aged 43.

Dr. Andrew L. Fulton, Bellevue Hospital Medical College, New York City, 1870; of Kansas City, Mo.; a prominent member of the profession; died at his home in Kansas City, July 15, 1913. Aged 70. Dr.

Fulton was a pioneer physician in his home city, where he practiced many years.

Dr. J. M. Finney, Sr. (Licensed, Missouri, Act of '83), died at his home in Cape Girardeau, Mo., June 1, 1913, from apoplexy. He was stricken while at the telephone answering a call and fell dead. Aged 61.

Camillus B. Faulconer, M.D., St. Louis Medical College, 1865; a physician and capitalist of Montgomery City, Mo.; died at his home Aug. 31, 1913, from nephritis. Aged 78.

Carl Fisch, M.D., Missouri Medical College, St. Louis, 1893; a fellow of the A. M. A., and a well-known pathologist and bacteriologist of St. Louis; died at his home Nov. 17, 1913, after a long illness. Aged 54.

Dr. John Burke Frecman (License, Missouri, 1883), at one time a member of the Missouri Legislature from Livingston County, died at Sturgis, about Feb. 24, 1912.

Dr. R. W. Garnett (License, Missouri, 1883), a practitioner at Chalk Level, Mo., for 58 years; died at his home April 1, 1914. Aged 85 years.

John Green, M.D., Harvard Medical School, Boston, 1866; LL.D. (honorary), Washington University, 1905; University of Missouri, 1906; a member of the American Ophthalmological Society and American Otological Society; Ophthalmic Surgeon to St. Luke's Hospital; Professor of Ophthalmology in the Medical Department, Washington University, since 1886; and at the time of his death professor emeritus; a pioneer oculist in the Southwest; Surgeon of Volunteers during the Civil War; one of the founders of the American Ophthalmological Society, Harvard Club of St. Louis, St. Louis Archeological Society and St. Louis Academy of Science; died at his home in St. Louis, Dec. 7, 1913, from pneumonia. Aged 78.

David E. Harding (Licensed in Missouri in 1883); a practitioner of Aurora, Missouri, for forty years; died at his winter home in Bradentown, Fla., March 17, 1913, from cerebral hemorrhage. Aged 70.

Duke W. Hunter, M.D., Jefferson Medical College, class 1854; a pioneer physician of Kansas City, Mo., and Major Surgeon of the Sixth Missouri Infantry Confederate Army during the Civil War; died at the home of his daughter in Kansas City, April 22, 1913, from the effects of a fracture of the hip. Aged 80.

Alexander P. Hamilton, M.D., Jefferson Medical College, Philadelphia, 1866; for many years a resident of Fredonia, Kan., and Carthage, Mo.; for twelve years Professor of Mathematics in a college in Lexington, Ky.; died at the home of his son near Carthage, June 13, 1913. Aged 78.

Charles B. Hardin, M. D., College of Physicians and Surgeons, Kansas City, 1881; Bellevue Hospital Medical College of New York, 1883; from 1883 to 1888 he practiced his profession at Independence, Mo., and from the latter date to his death, in Kansas City, Mo.; a member of the Missouri State Medical Association, and former President of the Jackson County Medical Society; died at his home in Kansas City, Aug. 21, 1913. Aged 57.

Edward Camplin Hill, M.D., Washington University, St. Louis, 1863; for many years a practitioner of Buchanan County, Mo.; died from heart disease at the county court room in St. Joseph, Oct. 20, 1913. Aged 76.

O. W. Hartle, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1903; a practitioner of Millersville, Mo.; died at his home, February 12, 1914, from heart disease. Aged 37.

Abraham Iralson, M.D., Barnes Medical College, St. Louis, 1900; fellow of the A. M. A. and a practitioner of Clifton Heights, St. Louis; died in the Deaconess Hospital, St. Louis, Aug. 2, 1913, from heart disease.

Charles M. Jones, M.D., St. Louis Eclectic Medical College, class 1883; for four terms Mayor of Baxter

Springs, Mo.; died at his home April 11, 1913, from pneumonia.

Henry Jones, M. D., Kentucky School of Medicine, Louisville, 1893; died at his home in Springfield, Mo., August 31, 1913, from cerebral hemorrhage, following heat prostration. Aged 52.

Benjamin C. Jones, M.D., Missouri Medical College, St. Louis, 1867, of Poplar Bluff, Mo.; formerly a Captain in the Confederate Army; twice a member of the Missouri State Legislature; framed and caused to be passed the Drainage Law of Missouri; brought about the establishment of the Confederate Soldiers' Home at Higginsville; at one time member of the Board of Managers of the Farmington Asylum; Food Inspector for South Missouri under former Governor Folk; died October 9, 1913. Aged 77.

John W. Kyger, M.D., University of Virginia, 1868; member of the Missouri Medical Association and Professor of Pediatrics in the Medical Department of the University of Kansas; died at his home in Kansas City, Mo., May 5, 1913, from cerebral hemorrhage. Aged 64.

Dr. R. E. Kiernan of Huntsville, Mo., died at his home, February 3, 1914. Aged 84 years. He was the pioneer physician of Randolph County; received his degree from the Missouri University in 1853; also the Cincinnati Medical College. He was a native of Dublin, Ireland, a great student and a poet of no mean ability.

Thomas B. Lloyd, M.D., Missouri Medical College, St. Louis, 1868; died at his home in Paris, Mo., Aug. 6, 1913, from senile debility. Aged 73.

Elmer E. Lamb, M.D., Eclectic Medical University, Kansas City, Mo.; died at his home in Kansas City, Oct. 8, 1913; aged 48 years. He had been in practice only a short time, but had been at the head of one of the departments of Hettinger Bros. Manufacturing Co. for 15 years.

John Wesley Lanius, M.D., Missouri Medical College, St. Louis, 1869; of Palmyra, Mo.; died in Leverisy Hospital, Hannibal, Mo., Oct. 15, 1913, from arteriosclerosis. Aged 71.

George C. Lasey, M.D., Northwestern Medical College, St. Joseph, Mo., 1888; member of the Missouri State Medical Association; died Dec. 2, 1913, from the effects of accident, which occurred while returning from the Hickory County Medical Society.

William V. Loftus, M.D., Missouri Medical College, St. Louis, 1879; a member of Missouri State Medical Association, for several years a medical editor in Kansas City; died at his home in St. Louis, March 13, 1914. Aged 64.

John E. Lopp, M.D., Barnes Medical College, St. Louis, 1898; formerly Health Commissioner and member of the City Council of Jefferson City, Mo.; died at his home in Lupus, Mo., March 23, 1914. Aged 39.

William E. McFarland, M.D., Beaumont Hospital Medical College, St. Louis, 1897, a member of the State Medical Society of Wisconsin; formerly a practitioner of Trempeleau; died at his home in Bismark, Missouri, June 7, 1913, from the effects of atropin, self administered, presumably with suicidal intent. Aged 47.

James Myers, M.D., Joplin (Mo.) Medical College, 1882; died at his home in Greensbury, Mo., June 27, 1913, after a protracted illness of about five years from a complication of diseases. Aged 65.

Leander D. McKee, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1868; a member of the Missouri State Medical Association; died at his home in Wayland, Mo., July 7, 1913, from heart disease. Aged 69.

Alphonso H. Madry, M.D., University of Louisville, Ky., 1886; fellow of the A. M. A. and President of the Southwest Missouri Medical Society; local surgeon

at Aurora, Mo., for the K. C., Ft. Scott & Memphis R. R.; died at his home in Aurora, Aug. 24, 1913, from disease of the lungs. Aged 53.

Charles E. Michel, M.D. Born in Charleston, S.C., May 9, 1833; studied medicine in Heidelberg and Paris; a Volunteer Surgeon in the Confederate Army, with rank of Major; for many years a prominent oculist in St. Louis; died at his home in St. Louis, Sept. 29, 1913. Aged 80 years. He retired from practice one year prior to his death.

James Nelson Magoon, M.D., K. C. Hospital College of Medicine, 1887; died at his home in Kansas City, Sept. 29, 1913. Aged 65.

Jesse S. Myer, M.D., Marion Sims College of Medicine, St. Louis, 1896; fellow of the A. M. A.; lecturer on physiology and clinical chemistry and microscopy in the St. Louis University from 1898 to 1902 and various other similar positions; author of a biography of Dr. William Beaumont; died at his home in St. Louis, Oct. 29, 1913, from leukemia. Aged 40.

O. L. Moore, M.D., Washington University, St. Louis, 1875; for many years a practitioner of St. Louis, and formerly Chief Diagnostician of the St. Louis Board of Health; who recently moved to Augusta, Mo.; died in St. Charles, Mo., Oct. 22, 1913, from heart disease. Aged 64.

Ephraim Magoon, M.D. A practitioner of St. Louis for 49 years; fell down steps at his home fracturing the seventh cervical vertebra, from which he died in Mullanphy Hospital, December 29, 1913. Aged 71.

Samuel G. Mercedith, M.D. Eclectic Medical Institute, Cincinnati, 1885; a member of the Missouri State Medical Association; Professor of Diseases of Children in Eclectic Medical University of Kansas City, Mo.; died at his home in Cowgill, Mo., Feb. 20, 1914. Aged 62.

Leander F. Murray, M.D., Louisville Medical College, 1876; a member of the Missouri State Medical Association; local surgeon for the Missouri Pacific and Missouri, Kansas and Texas Railroads; a member of the Board of Trustees of the State Hospital No. 3 at Nevada, Mo.; died at his home in Holden, Mo., March 21, 1914. Aged 66.

William A. Metcalf, M.D., Jefferson Medical College, 1884, of Steelville, Mo.; a member of the State Legislature in 1889; died in Josephine Hospital, St. Louis, March 17, 1914, from paralysis. Aged 63.

Louis C. Neele, M.D., Medical College of Virginia, Richmond, 1857; a practitioner of Saline County, Mo., since the Civil War, died at his farm near Sweet Springs, Mo., June 25, 1913, from senility and fracture of the forearm, the result of a fall. Aged 82.

John Tidwell Nethery, M.D., Vanderbilt University, Nashville, Tenn., 1891, died at his home in Caruthersville, Mo., Oct. 23, 1913, from cerebral hemorrhage. Aged 61.

Thomas M. Nixon, M.D., University of Pennsylvania, 1858; for fifty years an active practitioner of Calloway County, Missouri; died at his home in Harris Prairie, Feb. 24, 1914. Aged 85 years. Dr. Nixon was one of the Missourians who crossed the plains with gold hunters in 1849. He had retired from practice several years before his death.

R. C. Pierce, M.D., Indiana Central Medical College, Green Castle; class 1848; a practitioner of Indiana until 1882, when he moved to Kansas and then to Missouri; died at his home in Gallatin, Mo., March 13, 1913, from senile debility. Aged 85 years. He was a licensed preacher of the M. E. church.

Henry Mc E. Pettit, M.D., Jefferson Medical College; a surgeon in the Confederate service during the Civil War, and later a resident of Carrollton, Mo.; died in Frederick, Md., April 11, 1913, from diabetes. Aged 77.

John Pitman, M.D., Washington University, St. Louis, 1864; a member of the A. M. A.; Vice-President and one of the founders of the Bank of Kirkwood, Mo.; for twenty-eight years President of the Board of Education and for several years member of the Kirkwood Town Board; local surgeon Missouri Pacific Railway Co.; died in St. Luke's Hospital, St. Louis, May 28, 1913, from peritonitis, following operation for appendicitis. Aged 75.

Charles Owen Patton M.D., Bellevue Hospital Medical College, 1886; died at his home in McFall, Mo., Aug. 1, 1913. Aged 58.

John P. Pardue, M.D., Missouri Medical College, St. Louis, 1880; former Professor of Materia Medica and Hygiene in the St. Louis College of Physicians and Surgeons; died at his home in St. Louis, Aug. 29, 1913, from nephritis. Aged 61.

Howard C. Rice, M.D., Ensworth Medical College, St. Joseph, Mo., class 1910; a member of the American Medical Association; Instructor in Materia Medica in the Training School for Nurses, Ensworth Hospital; died at his home in St. Joseph, April 9, 1913, from pneumonia, aged 30.

Paul Gervais Robinson, M.D., Medical College of South Carolina, Charleston, 1856; surgeon in the Confederate service during the Civil War, and since the close of the war a practitioner of St. Louis; for many years Professor of Principles and Practice of Medicine in Washington University and Dean of the Faculty of the Missouri Medical College; died at his home in St. Louis, August 22, 1913, from heart disease. Aged 79.

Arthur D. Raines, M.D., St. Louis College of Physicians and Surgeons, 1898; died in his office in St. Louis from a gunshot wound in the head, self-inflicted, it is believed, with suicidal intent, Sept. 29, 1913. Aged 38.

John S. Rader, M.D., St. Louis College of Physicians and Surgeons, 1893; formerly Deputy Coroner of St. Louis County; died at his home in St. Louis, Oct. 22, 1913, from cerebral hemorrhage. Aged 55.

John L. Short, M.D., University Medical College, Kansas City, 1885; Oculist and Aurist at Grace Hospital, Versailles, Mo.; died at his home in Rolla, Mo., May 12, 1913, from cerebral hemorrhage. Aged 59.

John T. Stephenson, M. D., Missouri Medical College, St. Louis, 1882; a member of the Missouri State Medical Society; died at his home in Tina, Mo., June 7, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent. Aged 55.

Philip Scholz, M.D., St. Louis College of Physicians and Surgeons, 1889; a fellow of the A. M. A.; a pioneer druggist and physician of St. Louis, was struck by an automobile while alighting from a car, July 27, 1913; died at St. Mary's Infirmary, July 31. Aged 72.

Nathaniel M. Semple, M.D., Washington University, Medical Department, 1897; died in St. Louis, Oct. 3, 1913. He was born and reared at Liberty, Mo., and was a graduate of William Jewell College before he studied medicine. His professional life was spent in St. Louis. Aged 37.

David K. Stringer, M.D., College of Physicians and Surgeons, Keokuk, Iowa; a practitioner of Grundy and Sullivan Counties for forty-six years; died at the home of his daughter in Trenton, Mo., Nov. 11, 1913, from cirrhosis of the liver.

William L. Smith, M.D., Kentucky School of Medicine, 1893; member of the Missouri State Medical Association; for years a practitioner of Christian County; died in Springfield, Mo., January 20, from pneumonia. Aged 47.

William Wallace Stevens, M.D., University Medical College, Kansas City, Mo., 1901, a fellow of the American Medical Association; at one time assistant police surgeon of Kansas City; was crushed beneath his over-

turned automobile and died a few minutes later at Independence, Mo., Feb. 19, 1914. Aged 33. The funeral services were conducted by the Jackson County Medical Society and both honorary and active pallbearers were Kansas City physicians. (N. B.—Eulogy has been against our policy, but in this instance, we cannot refrain from adding that Dr. Stevens was a man of charming personality, with a warm heart, sterling integrity, a friend to humanity, an expert anesthetist. By his death, our profession has lost a real ornament, and suffering mankind, a sympathetic friend.—Harris.)

William Taussig, M.D., St. Louis University, 1851. LL.D., Washington University; a pioneer practitioner in St. Louis; Mayor of Carondelet in 1852; a member of the St. Louis County Court from 1859 to 1865, and its Presiding Judge during the last two years of this time, Director and General Manager of the St. Louis (Eads) Bridge Company from 1867 to 1896; a member of the St. Louis Board of Education from 1909 to 1911; died at his home July 10, 1913, from pneumonia. Aged 87.

Lewis J. Tandy, M.D., Washington University, St. Louis, 1886; died at his home in St. Louis, Aug. 28, 1913, from meningitis. Aged 51.

Dr. Fleming B. Todd (License, Missouri, 1883); for forty years a practitioner in North Central Missouri; died at his home in Madison, Mo., Sept. 18, 1913. Aged 77.

Dr. Meredith Taylor (License, Missouri, 1883); formerly Circuit Judge of Jasper County, Missouri; died at the Odd Fellows' Home in Liberty, Mo., Sept. 24, 1913, from cerebral hemorrhage. Aged 63.

Joseph Bailey Thomas, M.D., University of Iowa, Iowa City, in 1883; for thirty years a practitioner of Carthage, Mo.; died in the Zouro Infirmary, New Orleans, La., Jan. 7, 1914, in three days after an operation for gastric ulcer. Aged 54.

Charles A. Wilson, M.D., Harvard Medical School, class 1869; a member of the A. M. A.; formerly Surgeon in the U. S. Navy and a Veteran of the Civil War; died at his home in St. Louis, about May 19, 1913. Aged 70.

James W. Waters, M.D., St. Louis Medical College, St. Louis, Mo., 1888; for 20 years a practitioner of Bachelor, Mo.; died at Reform, Mo., May 21, 1913. Aged 46.

Henry V. Worley, M.D., Rush Medical College, 1880; an early settler of Pierce City, Mo.; died at the home of his daughter in that place, July 31, 1913. Aged 62.

John N. Washington. Received the degree of Ph.G. from the St. Louis College of Pharmacy in 1876, and the degree of M.D. from the Missouri Medical College, now Washington University, in 1879; died at his home in Van Buren, Mo., January 21, 1913. His early professional life was spent in active service in the cities of St. Louis and Chicago. In the year 1900, Dr. Washington left Chicago and sought health and recreation in the Ozark Mountains of Missouri. In 1903 he settled at Van Buren, Mo., where he practiced his profession until his death. He was 63 years old. He was a member of the Carter-Shannon County Medical Society, the Southwestern Missouri District Medical Society, the Missouri State and American Medical Associations. Also a member of the M. E. Church South, and the I. O. O. F.

William Webb, M.D., Jefferson Medical College, 1849; a member of the Missouri State Medical Association; a Surgeon in the Confederate Army throughout the Civil War; died at his home in St. Louis, January 21, 1914, from senile debility. Aged 80.

E. L. MILLER,
E. H. G. WILSON,
J. E. HARRIS, *Chairman,*
The Committee.

**MEMBERS REGISTERED AT THE ANNUAL
MEETING, JOPLIN, MAY 12, 13, 14, 1914**

Adair, T. W., Archie
 Adcock, J. A. B., Jefferson City
 Aiken, G. A., Malta Bend
 Alberty, O. L., Asbury
 Allee, G. D., Lamar
 Allee, W. S., Olean
 Allen, Wm. H., Rich Hill
 Altham, A. G., Metz
 Amerland, J. H., St. Louis
 Amerman, I. W., Nevada
 Anderson, A. L., Springfield

Bailey, Harold, Springfield
 Baldwin, Paul, Kennett
 Balsley, M. T., Joplin
 Barclay, Robert, St. Louis
 *Barker, J. Will, Joplin
 Barnes, F. M., Jr., St. Louis
 Barson, J. W., Oronogo
 Baumgarten, Walter, St. Louis
 Baysinger, S. L., Rolla
 *Beeson, J. P., Southwest City
 Berry, G. W., Montrose
 Binnie, J. F., Kansas City
 Bliss, M. A., St. Louis
 Bohan, P. T., Kansas City
 Bobbitt, A. N., Joplin
 Booth, D. S., St. Louis
 Boulware, T. C., Butler
 Breuer, W. H., St. James
 Brookshire, H. C., Hermitage
 *Brookshire, W. H., Duenweg
 Brown, A. F., Malta Bend
 Brown, F. H., Billings
 Brown, O. H., St. Louis
 Brown, Tinsley, Hamilton
 Bruton, T. S., Seymour
 Bryant, Carl H., Kansas City
 Buck, U. G., Rothville
 Bulman, Rudolph, St. Louis
 Burkhardt, E. A., Kansas City
 *Burnette, J. Z., Sulphur Springs, Ark.

Campbell, Given, St. Louis
 Cape, L. W., Maplewood
 Capell, Clarence, Kansas City
 Carter, O. N., Republic
 Chenoweth, L. C., Webb City
 Clapp, C. B., Moberly
 Clark, A. Benson, Joplin
 Clark, W. A., Jefferson City
 Clemmons, W. M., Kansas City
 Clopton, Malvern B., St. Louis
 Coffelt, Theo. A., Springfield
 Colson, J. R., Schell City
 Conover, C. C., Kansas City
 Coombs, M. O., Joplin
 Cope, J. Q., Lexington
 Cordonnier, S. X., Avilla
 Cotton, T. W., Van Buren
 Coughlin, W. T., St. Louis
 Cox, Lee, Springfield
 Craig, C. H., Webb City
 Craig, T. B. M., Nevada
 Crawford, R. O., El Dorado Springs
 Crume, R. O., Richards
 Cummings, C. C., Joplin
 Cuppaidge, G. O., Moberly

Davidson, A. W., Poplar Bluff
 Davis, C. B., Walker
 *Davis, J. R., Noble

* Visitor.

DeVilbiss, Frank, Tipton
 Dickerson, H. W., Joplin
 Dorsett, Walter B., St. Louis
 Doty, E. T., Anderson
 Duemler, T. B., Seneca
 Dumbauld, B. A., Cartersville
 Dunaway, L. T., El Dorado Springs

*Edelen, J. E., Joplin
 Edgell, O. K., Eolia
 Elam, W. T., St. Joseph
 Elliott, James H., West Plains
 Epler, J. W., Sheldon
 Estill, W. G., Lawson

Fair, J. F., Trenton
 Farrington, O. P., Moundville
 Fassett, Chas. W., St. Joseph
 Ferguson, W. J., Sedalia
 Fisher, A. T., St. Joseph
 Foster, H. F., Neosho
 Fox, S. D., Kansas City
 Fredendall, G. W., Lexington
 Frick, Wm., Kansas City
 Frick, W. J., Kansas City
 Fulkerson, J. T., Anderson
 Funkhouser, Robert M., St. Louis
 Fuson, J. A., Mansfield

Gaddie, W. R., Duenweg
 Gentry, W. H., Carthage
 *Gibson, E. R., Carl Junction
 *Glasscock, S. S., Kansas City
 Goodwin, E. J., St. Louis
 Grace, H. M., Chillicothe
 Grantham, S. A., Joplin
 Gregg, A. M., Joplin
 Griffin, W. L., Lamar
 Griffith, A. Comingo, Kansas City
 Griffith, J. D., Kansas City
 Grindon, Joseph, St. Louis
 *Griswold, J. L., Columbus, Kan.

Haire, Robt. D., Clinton
 Hall, C. Lester, Kansas City
 Hall, John R., Marshall
 Hall, John R., Napton
 Hall, O. B., Warrensburg
 Hall, T. B., Marshall
 Hamel, A. H., St. Louis
 Hamilton, Hugh D., Kansas City
 Hancock, J. B., Newtonia
 Harris, J. A., Mt. Vernon
 Harutun, M. B., Joplin
 Harwell, J. Lee, Hendrickson
 Henderson, James P., Kansas City
 Henson, L., Galena
 Hertzler, A. E., Kansas City
 Hetherlin, T. Guy, Louisiana
 *Hill, D. R., Joplin
 Hill, Kimball, Eldorado Springs
 Hill, Howard, Kansas City
 Hoshaw, U. G., Joplin
 Hornback, J. T., Nevada
 *Huffman, Chas. S., Columbus, Kan.
 Hughes, B., Mt. Vernon
 Hunt, T. G., Salem
 Hunter, Jas. A., Fairfax
 Hoxie, G. H., Kansas City

Jackson, Jabez N., Kansas City
 James, Edwin F., Springfield
 James, R. M., Joplin
 Johnson, J. W., Hayti
 Johnson, S. A., Springfield

* Visitor.

Kane, R. Emmet, St. Louis
 Keithly, C. L., Milo
 Kerr, H. L., Crane
 Ketcham, E. M., Carthage
 *Ketcham, Elizabeth, Carthage
 Kincheloe, M. B., Joplin
 Kirchner, Walter C. G., St. Louis
 Klingner, Thos. O., Springfield
 Koetter, A. F., St. Louis
 Korn, A. L., Joplin
 *Krohn, H. N., Denver, Colo.
 Kuhn, H. P., Kansas City

Lamson, R. C., Neosho
 Langley, J. W., Granby
 Lanyon, W. H., Joplin
 Latham, Henry W., Latham
 Leaming, H. A., Joplin
 Leighton, W. E., St. Louis
 Leisure, E. A., Stotesbury
 Lemon, A. L., Otterville
 Lichtenberg, Jos. S., Kansas City
 Lindley, W. T., Hamilton
 Liston, E. H., Cedar Springs
 Lockwood, T. F., Butler
 Long, F. B., Sedalia
 *Loudermilk, R. C., Galena, Kan.
 Love, Jos. W., Springfield
 Loveland, W. S., Verona
 Lucas, H. R., Joplin
 Ludwick, A. L., Kansas City
 Lusk, C. A., Butler
 Lutz, F. J., St. Louis
 Lyle, Halsey M., Kansas City

Mack, Mary L., Joplin
 Mann, A. W., Oak Grove
 Manning, D. F., Marshall
 Mark, E. G., Kansas City
 *Markham, R. M., Scammon, Kan.
 Marr, R. B., Filley
 Matthews, F. H., Liberty
 *Matthews, L. I., Carthage
 McAlester, A. W., Columbia
 McAlester, A. W., Jr., Kansas City
 McBaine, R. H., St. Louis
 McCallum, F. M., Kansas City
 *McCarthy, V. W., Kansas City
 McCall, Green D., Fulton
 McCandless, O. H., Kansas City
 McCandless, W. A., St. Louis
 McComas, A. R., Sturgeon
 McComb, J. A., Lebanon
 McComb, J. L., Lamar
 McConkey, C. M., Lathrop
 McDonald, Chett, Kansas City
 *McKinney, F. L., Galena, Kan.
 *McKinney, R. B., Columbus, Kan.
 *McKinney, Wm., Latham, Kan.
 McLemore, T., Nevada
 McNees, A. J., Clinton
 Miller, E. H., Liberty
 Miller, Geo. W., Joplin
 Miller, J. M., Montrose
 Mitchell, Guy B., Branson
 Monroe, A. E., Sedalia
 Moore, J. G., Mexico
 Moore, W. G., St. Louis
 Morgan, John F., Joplin
 Morrow, W. F., Kansas City
 Morton, Daniel, St. Joseph
 Murphy, Franklin E., Kansas City
 Murray, S. A., Holden
 Myers, G. T., Macks Creek

* Visitor.

Neff, Robt. L., Joplin
 Neilson, C. H., St. Louis
 Newlon, J. S., Butler
 Norberg, Geo. B., Kansas City
 Noyes, Guy L., Columbia
 Num, J. C., Maywood

O'Dell, T. T., Ellington
 Oliver, Everett A., Richland
 Owens, M. J., Kansas City

Parker, H. F., Warrensburg
 Patterson, Wm. P., Springfield
 Pearce, Herman E., Kansas City
 Pipkin, W. D., Excello
 Porter, H. L., Seneca
 Post, M. B., Carthage
 Potter, T. E., St. Joseph
 Powers, H. C., Joplin
 Press, M. J., St. Louis
 Pritchett, Paul L., Webb City
 Pritchett, W. M., Glasgow
 Prowell, J. D., Longwood

Ragan, S. T., Ardmore
 Ramsey, C. F., Napoleon
 Redman, Spence, Platte City
 Redwine, T. J., Poplar Bluff
 Rice, James W., Berlin
 Roberts, C. S., Boonville
 Roberts, J. F., Bolivar
 Robertson, R. C., Aurora
 Robinson, G. Canby, St. Louis
 Robinson, J. F., Nevada
 Robinson, John L., Kansas City
 Robinson, G. Wiise, Kansas City
 Rodman, W. W., Pierce City
 Ross, L. C., Springfield
 Rotter, Chas. F., St. Louis
 Royston, W. P., El Dorado Springs
 Russell, C. W., Springfield
 Russell, J. M., Monnett
 Ryland, C. T., Lexington

Sauer, Wm. E., St. Louis
 Schauffler, E. W., Kansas City
 Schauffler, Robt. McE., Kansas City
 *Schellack, E. H., Galena, Kan.
 Schisler, Edwin, St. Louis
 Schlueter, Robert E., St. Louis
 Schorer, Edwin Henry, Kansas City
 Searcy, W. P., Exeter
 Sevier, Robert, Richmond
 Shankland, Wm. M., Clinton
 Sheetz, Robt., Orrick
 Sheldon, J. G., Kansas City
 Shelton, M. C., Joplin
 Shelton, C. W., Mt. Vernon
 Shelton, Wm. A., Kansas City
 Shuttee, H. C., West Plains
 Shy, D. E., Knobnoster
 Shy, Wm. P., Sedalia
 Skinner, E. H., Kansas City
 Sloan, O. J., Bloomington, Ill.
 Smart, R. W., Crane
 Smith, E. S., Macon
 Smith, Chas. Wilbur, Springfield
 *Snell, L. C., Ritchey
 Snyder, A. R., Joplin
 Spotts, B. M., Marshall
 Stauffer, W. H., St. Louis
 Steele, W. E., Carthage
 Stormont, R. M., Carterville
 Stratton, C. D., Rothville

* Visitor.

Tainter, F. J., St. Charles
 Talbott, Hudson, St. Louis
 Taulbee, J. B., Joplin
 Taylor, C. B., Carthage
 Thraikill, E. H., Kansas City
 Tiffany, Flavel B., Kansas City
 Timberman, John H., Marston
 Titsworth, Guy, Sedalia
 Todd, L. A., St. Joseph
 Trimble, Wm. K., Kansas City
 Triplett, J. S., Harrisonville
 Tupper, Paul Y., St. Louis

Unterberg, H., St. Louis

Van Eman, F. T., Kansas City

Wade, J. H., Ponce de Leon
 Walker, G. S., Harwood
 Welch, J. Franklin, Salisbury
 Welcome, E. H., Joplin
 West, W. M., Monett
 Wiener, M., St. Louis
 Wilbur, H. L., Granby
 Willy, O. F., Webb City
 Williams, J. H., Hume
 Williams, W. A., Hume
 Wills, R. L., Neosho
 Willson, G. C., Nevada
 Winningham, Wm. H., Trenton
 Wood, N. P., Independence
 Woodson, C. R., St. Joseph
 Wooley, Paul V., Kansas City
 Wright, J. B., Trenton

Yater, J. M., Nevada
 Yates, Martin, Fulton

Total, 314

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 the members of the component county medical societies.

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 pub-

lication, 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 50 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 post-graduate 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 Meeting 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 session 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 more 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 books 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 daily 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 meet on the last day of the Annual Session of the Association for reorganization and for the outlining of work for the ensuing year. At this meeting it shall elect a Chairman and 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 and shall act for the Association during the interval between meetings.

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. Further, to facilitate this work, it shall be the duty of the Secretaries of the Sections, during each Annual Session, or as soon thereafter as practicable, to deliver to the editor, or his duly appointed agent, all such proceedings, reports, addresses, papers and other documents, as may have been ordered for publication. 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 communications shall be officially signed by the Chairman and Secretary of the Council, as such.

CHAPTER VIII.—COMMITTEES AND SECTIONS.

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 the 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 enrollment 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 \$100.00 for all such services. The Association does not obligate itself 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 sanitarium 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 (1912) 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 investigate the entire subject of vaccination and its relation to small-pox 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 committee of its own selection, provide suitable accommoda-

tions 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. 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.

The principles set forth in the Code of Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

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 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 post-graduate 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 Sessions.

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 Ses-

sion, 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 Sessions.

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.

ST. LOUIS MEDICAL SOCIETY

Meeting of the General Society

MAY 23, 1914

The meeting was called to order at 8:45 p. m., the president, Dr. A. F. Koetter, in the chair.

The scientific program consisted of the following:

Dr. F. A. Baldwin exhibited specimens illustrating various cardiac lesions.

Dr. W. C. G. Kirchner exhibited and demonstrated the bundle of His by injection of the sheath in an ox heart.

Dr. T. C. Hempelmann presented two patients—one a case of regurgitation and the other a case of congenital heart disease.

The chair declared a recess to examine Dr. Hempelmann's patients and the specimens of Drs. Baldwin and Kirchner.

Dr. J. J. Singer read a paper entitled, "A New, Simple Stethoscope," with demonstration of various types and illustrated with lantern slides.

Dr. O. H. Campbell demonstrated cases of aortic stenosis, mitral regurgitation and aneurysm, and mitral regurgitation.

Dr. A. E. Taussig reported and exhibited sphygmographic tracings of pericarditis.

Dr. L. H. Hempelmann exhibited a radiograph of a case of aneurysm (thoracic).

Dr. Fred Hall demonstrated a series of radiographs of the chest, showing various heart lesions. These were aneurysms and cardiac enlargements due to heart lesions and effusions into the pericardial sac.

The chair declared a recess to examine the Singer Stethoscope and the radiographs.

Discussion by Drs. A. E. Taussig, A. C. Robinson, L. C. Boisliniere; Dr. Singer closing.

On motion the society adjourned at 10:24 p. m. Attendance 108.

JUNE 6, 1914

The meeting was called to order at 9:10 p. m. by the president, Dr. A. F. Koetter.

The president announced that Dr. Whelpley would conduct a party to Monk's Mound in Illinois. The party started at the west end of Ead's bridge at 4:10 p. m. and arrived at the mounds at 4:45 p. m. Returning, the cars arrived in St. Louis at 6:30 and 7:30 p. m. All present were urgently invited to take the trip.

The president also announced that the stereopticon slides which Dr. Whelpley would use had been colored by Mrs. Whelpley.

The program consisted of the following: "The Mounds and Mound Builders," illustrated with colored lantern slides.

Discussed by Dr. Grindon.

On motion, Dr. Boisliniere moved and it was seconded, that a vote of thanks be extended Dr. Whelpley for his most interesting paper and that our appreciation be shown by rising. Carried.

On motion the society adjourned to the parlors at 10:30 p. m., where refreshments were served. Attendance 158.

Meeting of the Council

JUNE 10, 1914

The meeting was called to order at 8:40 p. m. by the secretary. The secretary stated that the president had telephoned he was detained and could not be present until late and asked that someone be elected chairman, pro tem.

Dr. Robert M. Funkhouser was elected temporary chairman.

The minutes of the previous meeting were read and approved.

Dr. A. H. Sewing, chairman of the membership committee, read a report.

Drs. Augusta Helle, Claude D. Halley, Arthur E. Walters and C. Q. McGinnis were elected by ballot.

The application of Dr. Samuel E. Peden for active membership, by transfer from the Marion County Medical Society, received its second reading.

Dr. Peden was elected an active member.

Dr. Kirchner, chairman of the program committee, reported the necessity of renting a moving picture apparatus and the hiring of an operator for the meeting of Saturday, June 13, at which time Dr. Otfried Foerster, professor of neurology, Breslau, Germany, will lecture on the treatment of spastic paralysis.

On motion the request was granted and the program committee authorized to rent a machine and hire help to operate same.

The secretary read the following report for the committee on ethics.

To the Council of the St. Louis Medical Society, Gentlemen:

Your committee on ethics have considered the Articles of the Association and the By-laws of the Doctors' Mutual Protective Association and find that a member of the St. Louis Medical Society may become a subscriber or member of the aforesaid Association without violating the Constitution and By-laws of this society.

Respectfully submitted,
(Signed) E. J. SCHISLER, *Chairman.*

Dr. Lutz, chairman of the library committee, made the following report:

ST. LOUIS, Mo., June 10, 1914.

To the Council:

The library committee desires again to call attention to the improved physical condition of the library and to the greater patronage which is bestowed on it by the members of our society as well as to its increased usefulness.

The inventory has been completed, as will be observed from the subjoined report of the librarian. It shows that we have almost 6,000 volumes on our shelves. The report should also commend the wisdom of the rules restricting the removal of books and journals according to the rules endorsed by the Council and to which the library committee will exact strict adherence on the part of the librarian.

Nine dollars has been received from the sale of incomplete journals.

The following is the report of the librarian to the committee:

Dr. F. J. Lutz, Chairman Library Committee, Sir:

The following is the report of the month of May, 1914:

Books added to the library.....	15
Books and Journals consulted.....	180
Books and Journals loaned.....	12
Visitors to the library.....	125

The inventory of the library which was begun in March was finished this month. The number of titles in the library is as follows: General, 154; History, 121; Transactions, 171; Reports, 142; Journals, 615; Ethics, 15; Anatomy, 163; Histology, 73; Physiology, 159; Chemistry, 321; Therapeutics, 223; Pathology, 102; Bacteriology, 61; Practice of Medicine, 872; Surgery, 598; Gynecology, 192; Pediatrics, 112; Neurology, 214; Otolaryngology, 50; Ophthalmology, 129; Laryngology, 90; Genito-Urinary, 135; Syphilology, 89; Dermatology, 95; Dentistry, 21; Veterinary Medicine, 4; Medical Jurisprudence, 39; Hygiene, 67; Collateral Science, 42. Total number of titles, 6,113.

This inventory showed 32 books missing, as follows: Anatomy, 1; Histology, 2; Therapeutics, 2; Medicine, 6; Surgery, 3; Gynecology, 3; Obstetrics, 5; Pediatrics, 1; Laryngology, 1; Genito-Urinary, 5; Syphilology, 3; also 77 Journals; total number of volumes missing, 109. Some are undoubtedly lost, as the cards are marked "missing" from previous inventories, while some may yet be recovered. Total number of volumes accessioned to June 1, 16,000; deducting the 109 missing volumes, leaves total of 15,891 volumes in the library at the present time. A card catalog of the Transactions and Proceedings of Societies has also been made this month.

Respectfully submitted,
(Signed) ELLA B. LAWRENCE, *Librarian.*

On motion the report of the library committee was accepted.

Moved and seconded that the \$9 received for incomplete Journals which were sold by the library committee and which has been turned over to the treasurer, be credited to the library committee.

On motion the library committee was authorized to sell or exchange duplicates in the future as may benefit the library, in the opinion of the committee.

The secretary read the following letter from Dr. Lutz:

May 22, 1914.

To the Council:

I want to call your attention to the fact that the meeting of ladies which is held in the parlor of the society interferes with the reading-room and with the clerical force on account of the loud talking which perhaps is necessarily connected with the meeting.

I would suggest that in future the meetings be held in the general auditorium.

Very respectfully yours,
(Signed) F. J. LUTZ, *Chairman,*
Library Committee.

On motion this matter was referred to the house committee for adjustment.

The president took the chair at 9:30 p. m.

The secretary read the following letter from the Honorable James T. Lloyd of the House of Representatives:

June 1, 1914.

Dear Dr. Kuhlmann:

I received from you on the 8th day of April a communication with reference to the Surgeon General's Library, which was answered at the time, and it is

possible that from that letter an impression has gone out that I was in favor of the merger of the two libraries. My purpose in the answer to you was to give you the argument that was made in favor of the merger by those who advocate it—but following that the amendment to the Army Appropriation Bill came to the House and I voted against the amendment.

I write this because I am advised that somebody has charged somewhere that I was actively supporting this proposed merger. As far as I have information I have never received any communication from anyone excepting yourself with reference to the matter, and I now write to you because it has been called to my attention that I was censured at the state convention at Joplin for supporting the measure. Any statement that I supported the measure is absolutely false, and I would appreciate it very much if you are in any way responsible for the circulation of the report that I was supporting the measure, that you correct it.

Sincerely yours,

(Signed) JAMES T. LLOYD.

The secretary was instructed to reply with a copy of Mr. Lloyd's first letter.

The president read the following letter from Dr. Wm. L. Rodman:

Dear Doctor:

It gives me great pleasure to receive official notice of my election as an honorary member of the St. Louis Medical Society. I very much appreciate the honor done me. I can recall no professional experience which brought me more pleasure than addressing the large, attentive audience you gave me on April 25.

Very truly yours,

(Signed) Wm. L. RODMAN.

Councilors present: Drs. Amerland, Bliss, Burford, Funkhouser, Hill, Hoffman, Krebs, Stauffer, Hamel and Koetter.

Councilors absent: Drs. Dorsett (sick), Hinchey and Hurford.

Visitors present: Drs. Carroll Smith, A. H. Sewing, W. C. G. Kirchner, Frank J. Lutz, Marsh Pitzman and J. W. Marchildon.

On motion the Council adjourned at 9:45 p. m.

F. C. E. KUHLMANN, M.D., *Secretary*.

CALDWELL COUNTY MEDICAL SOCIETY

The Caldwell County Medical Society met June 4 in Kingston in the office of Dr. J. E. Gartside. Those present were: Drs. Tinsley Brown, H. E. Epperson, W. M. Duffie, W. T. Lindley of Hamilton; Dr. E. Van Note of Kansas City; Drs. W. L. Chaffin and J. A. Waterman of Breckenridge; Drs. J. E. Gartside and W. S. Shouse of Kingston; Drs. E. F. Higdon and R. L. Mount of Polo, and Dr. I. N. Parrish of Cowgill.

Dr. W. L. Lindley of Hamilton, Dr. E. F. Higdon of Polo and Dr. George Dowell of Braymer were appointed members of the National Red Cross by the President, Dr. Tinsley Brown.

We had a most excellent paper on arteriosclerosis by Dr. Tinsley Brown. It was discussed by Drs. E. Van Note, E. F. Higdon and W. T. Lindley, and closed by Dr. Brown.

Breckenridge was named as the next place of meeting, on the third Thursday in July.

The secretary was ordered to buy enough books on "Men's Specialists Frauds" to give one to each editor in the county.

There being no other business, we adjourned to meet in Breckenridge on the third Thursday in July, and all went home feeling it was a day well spent.

J. A. WATERMAN, M.D., *Secretary*.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, 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":

ELECTRARGOL.—Electrargol is a colloidal solution of silver, containing silver, equivalent to 0.25 per cent. metallic silver. It is said to be useful in febrile diseases, even in those which are not of a septic character. It is also used externally in inflammatory conditions. For subcutaneous, intramuscular or intravenous injections electrargol is supplied as Electrargol for Injection in ampoules containing 5 c.c. For external use electrargol is supplied as Electrargol for Surgical Use in bottles containing 50 c.c. (*Jour. A. M. A.*, June 6, 1914, p. 1808).

REFINED AND CONCENTRATED TETANUS ANTITOXIN.—Marketed in packages containing 5,000 units (curative dose put up in syringe containers. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, June 13, 1914, p. 1890).

CULTURE OF BULGARIAN BACILLUS, MULFORD.—A pure culture in tubes of the *Bacillus bulgaricus*. It is designed for internal administration for the purpose of establishing lactic-acid-producing bacilli in the intestines and for external use. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, June 13, 1914, p. 1890).

LACTOBACILLINE TABLETS.—A pure culture of the *Bacillus bulgaricus*. These tablets give rise to the production of considerable quantities of lactic acid, which tends to restrain the growth of putrefactive organisms in the intestines. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1890).

LACTOBACILLINE LIQUIDE, CULTURE A.—A pure culture in tubes of the *Bacillus bulgaricus* grown in a neutralized sugar bouillon, each tube containing from 5 to 6 c.c. Its actions and uses are the same as those of Lactobacilline Tablets, Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE LIQUIDE, CULTURE D.—A pure culture in tubes of the *Bacillus bulgaricus* grown in a neutralized bouillon. Its action and uses are the same as those of Lactobacilline Tablets. Marketed as Lactobacilline Liquide, Culture D., Small containing 5 c.c., and Lactobacilline Liquide, Culture D., Large containing 16 c.c. in each tube. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE LIQUIDE, INFANT'S CULTURE.—A pure culture in tubes of the *Bacillus bulgaricus* in a whey medium. It is employed in the treatment of diarrhea or dysentery in nursing infants or young children. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE GLYCOGENE TABLETS.—Tablets containing pure cultures of the *Bacillus bulgaricus* and the *Glycobacter peptolyticus*. The *Glycobacter peptolyticus* transforms into sugar the amylaceous substances in the diet, thereby furnishing a pabulum for the *B. bulgaricus*, which in turn transforms the sugar into lactic acid. These tablets are designed for the prevention and treatment of intestinal diseases. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE GLYCOGENE LIQUIDE.—A pure culture in tubes of the *Bacillus bulgaricus* and the *Glycobacter peptolyticus*. Its action and uses are the same as those for Lactobacilline Glycogene Tablets. Marketed as Lactobacilline Glycogene Liquide, Small containing 5 c.c., and Lactobacilline Glycogene Liquide, Large containing 16 c.c. in each tube. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE MILK TABLETS.—Tablets containing pure cultures of the *Bacillus bulgaricus* and *Bacillus paralyticus*. These tablets are used in the preparation of scientifically soured milk. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE SUSPENSION.—A pure culture in tubes of the *Bacillus bulgaricus* grown in a neutralized bouillon medium. This culture tends to inhibit the growth of deodorant, putrefactive and pathogenic organisms and is used externally in various suppurative conditions. Marketed as Lactobacilline Suspension, Surgical, containing 20 c.c. in each tube. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

LACTOBACILLINE MILK FERMENT.—A pure culture in tubes of the *Bacillus bulgaricus* and *Bacillus paralyticus*. Its action and uses are the same as those of Lactobacilline Milk Tablets. Franco-American Ferment Co., New York (*Jour. A. M. A.*, June 13, 1914, p. 1891).

PROPAGANDA FOR REFORM

SCOPOLAMIN - MORPHIN ANESTHESIA. — *McClure's* Magazine for June contains a sensational account of the use of scopolamin-morphin in anesthesia as used by Grönig and Gauss at Freiburg. In America the scopolamin-morphin anesthesia has received little attention. It is far from safe and can be carried out only in hospitals. Morphin and scopolamin should not be used in fixed proportions (*Jour. A. M. A.*, June 6, 1914, pp. 1815 and 1829).

GLYCO-HEROIN, SMITH.—A report of the Council on Pharmacy and Chemistry explains that Glyco-Heroin, Smith, although containing 1/16 grain heroin to the teaspoonful, is exploited in a way to encourage self-drugging by the layman. The advertising matter suggests the administration of Glyco-Heroin, Smith, to children and much of it has contained the evident falsehood that this heroin mixture does not produce narcotism or habituation. The possibility of habit formation should be sufficient to induce the thoughtful physician to avoid the use of Glyco-Heroin, Smith (*Jour. A. M. A.*, June 6, 1914, p. 1826).

WINE OF CARDUI.—The Chattanooga Medicine Company claims that no more alcohol is used in Wine of Cardui than is needed to preserve it and that it cannot be used as a beverage. In view of this the terms "booze" and "tipple" cannot be applied to the preparation (*Jour. A. M. A.*, June 6, 1914, p. 1827).

BUFFALO LITHIA WATER.—The fallacy that diseases are due to uric acid and the fallacy that lithium would eliminate the uric acid has made mineral waters highly profitable—even when lithium was present only in infinitesimal amounts. One of the most widely used "lithia waters" was Buffalo Lithia Water, later called Buffalo Lithia Springs Water, which has been declared misbranded by the Federal Courts because it was shown to contain less than does Potomac River water and that a person would have to drink 150,000 to 225,000 gallons of the water to obtain an ordinary dose of lithia. The testimonials certifying to the high

efficiency of Buffalo Lithia Water and its superiority to lithium compounds given in the past by physicians eminent in their profession, certify to the unreliability of clinical observations (*Jour. A. M. A.*, June 13, 1914 p. 1909).

THE ABSORPTION OF IRON.—The belief that organic compounds of iron were superior to inorganic iron salts arose before it was known that the bowel forms the most important channel for the excretion of this element, whence the failure to find an increase in the amount of iron eliminated with the urine by means of the kidneys after ingestion of the element in some form or other was taken as an indication that it had not been absorbed. To-day it is known that iron can be absorbed and excreted by the intestinal wall. Experiments have demonstrated that both inorganic and organic iron can be absorbed and satisfactorily carry out the purposes for which iron is administered (*Jour. A. M. A.*, June 13, 1914, p. 1913).

PROPHYLAXIS OF TETANUS.—The following procedure is advised: Remove every particle of foreign matter from the wound. Dry the wound and treat every part with iodine or cauterize it with a 25 per cent. phenol solution and apply a wet pack saturated with boric acid solution or alcohol. Inject as soon as possible, intravenously or subcutaneously, 1,500 units of antitetanic serum and repeat the injections if indications of possible tetanus arise. In no case close the wound, but allow it to heal by granulation (*Jour. A. M. A.*, June 20, 1914, pp. 1964 and 1971).

BEEF, WINE AND COCA.—This preparation, sold by Sutliff, Case & Co., Peoria, Ill., was claimed to contain about 15 per cent. alcohol and 1/5 of a grain of cocain to the fluidounce. It was found to contain 23.75 per cent. alcohol by the federal authorities and accordingly declared misbranded by the courts (*Jour. A. M. A.*, June 20, 1914, p. 1981).

MALT NUTRINE.—This product of the Anheuser-Busch Brewing Association was declared misbranded by the government authorities because the label claimed that it was a highly concentrated extract of malt, which was untrue. Malt Nutrine was found to contain 1.6 per cent. alcohol and extravagant therapeutic claims were made for it (*Jour. A. M. A.*, June 20, 1914, p. 1981).

MANADNOCK LITHIA WATER.—While extravagant curative claims were made for this "lithia water" examination showed it to contain only traces of lithia and hence it was declared misbranded under the Food and Drugs Act (*Jour. A. M. A.*, June 20, 1914, p. 1981).

BUCKHORN LITHIA WATER.—This water was declared misbranded by the federal authorities because false curative claims were made for it and because it did not contain enough lithia to be entitled to its name (*Jour. A. M. A.*, June 20, 1914, p. 1981).

SUN-RAY SPARKLING WATER.—While represented to be "the world's purest water," it was water to which sodium chlorid, sodium bicarbonate and carbon dioxid had been added. Accordingly the company which sold the water was found guilty of misbranding under the Food and Drugs Act (*Jour. A. M. A.*, June 20, 1914, p. 1981).

HICCURA MINERAL WATER.—This was declared misbranded because it was not a natural mineral water as claimed (*Jour. A. M. A.*, June 20, 1914, p. 1981).

RAYMOND'S PECTORAL PLASTERS.—These are exploited untruthfully as "positive cures" for whooping cough, bronchitis, etc. (*Jour. A. M. A.*, June 20, 1914, p. 1982).

LIQUID ALBOLENE.—This is a light variety of liquid petrolatum marketed as a proprietary medicine, exploited in an objectionable manner and with more or less misleading claims. It is said to come from Russia and differs from American products in being entirely non-fluorescent—an immaterial difference (*Jour. A. M. A.*, June 27, 1914, p. 2048).

BOOK REVIEWS

THE MEDICAL AND SANITARY INSPECTION OF SCHOOLS. By S. W. Newmaker, A.B., M.D., in charge of the Division of Child Hygiene, Bureau of Health, Philadelphia. 12mo, 318 pages, with 71 engravings, and 14 full-page plates. Cloth, \$2.50 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

The author shows great understanding of this subject and an extensive knowledge of practical teaching methods for physicians, nurses and teachers in the physical examination of school children, how to prevent epidemics of contagion and the correction of physical defects.

The chapter on sanitation of school buildings has received special attention. Plans of work have been formulated to meet all requirements for efficiency, time, labor and money saving. The illustrations are new and many of the subjects treated have heretofore been neglected. The ventilation of school-rooms, cold-room and open-air schools are shown to be of great importance. We would like to have all school people read this chapter and act on its message.

The work on the mentality of schoolchildren is wonderful. While the reviewer does not agree with the author "that the teaching of sex hygiene in the schools is to be highly commended," it cannot be denied that this book is the "last word" in our present knowledge on school inspection. It should be in the library and constantly used by every one interested in school life and social medical work.

CHEMICAL PATHOLOGY. Being a discussion of general pathology from the standpoint of the chemical processes involved. By H. Gideon Wells, Ph.D., M.D., Professor of Pathology in the University of Chicago and in Rush Medical College, Chicago. Second edition, thoroughly revised. Octavo of 616 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.25 net.

This book, a success from the start and the only complete work on this subject, has now entered into a greatly enlarged and revised second edition. That this is in many respects almost a new work can be gathered from the statement of the author that since the publication of the first edition the science of biological chemistry has progressed more rapidly and received more substantial contribution than in all its previous history. Included in this progress may be mentioned the chemical aspects of immunity, work on the nature of proteins, ductless gland studies, and the mass of literature that has sprung up in colloid chemistry.

This is not only a book for the scientist but the practitioner who wishes to keep abreast of the times cannot afford to be without this valuable work.

THE JOLIET PRISON POST. Published monthly by the Board of Commissioners and the Warden of the Illinois State Penitentiary, Joliet, Ill.; edited by a prisoner. Price per year, \$1.

The first volume of six numbers of this unique publication edited by a prisoner has just come to our

notice. Every lover of humanity and fair play, under whatever name, will surely be interested in this little monthly journal, presenting as it does the prisoner's view of things, with straightforwardness and without sickly sentimentality. The eyes of the whole country are focused on the prison at Joliet, watching with intense interest the workings of the new parole law, the first anniversary of which has just been celebrated; and no less are they focused on the efficient and courageous Warden, Mr. E. M. Allen, who made this and other prison reforms possible.

PSYCHANALYSIS: ITS THEORIES AND PRACTICAL APPLICATION. By A. A. Brill, Ph.B., M.D., Chief of Clinic of Psychiatry and Clinical Assistant in Neurology, Columbia University Medical School; Chief of the Neurological Department of the Bronx Hospital and Dispensary. Second edition, thoroughly revised. Octavo of 393 pages. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3.00 net.

In less than two years this book, now considerably enlarged, has entered into its second edition. It would probably be rated among the "six best sellers" if it could be exploited as "recent fiction." But, fortunately or unfortunately according to one's type of mind, this work must be taken seriously. This is no place to argue Freudism. One is either for it or against it and once having accepted it or thrown it down argument would cut as much figure as with an antivaccinationist. One thing may be said, however, if the reader is detached enough to have no strong feelings either for or against psychanalysis, he can have lots of enjoyment reading the book.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in medical and surgical sciences, edited by Hobart Amory Hare, M.D., assisted by Leighton F. Appleman, M.D. Octavo of 452 pages, illustrated. Philadelphia and New York: Lea & Febiger, 1914. Price per year, paper, \$6.

The subjects considered by noted contributors in the June number are as follows: Hernia, by William B. Coley; Surgery of the Abdomen, exclusive of Hernia, by John C. A. Gerster; Gynecology, by John G. Clark; Diseases of the Blood, Diabetic and Metabolic Diseases, Diseases of the Thyroid Gland, Spleen, Nutrition and the Lymphatic System, by Alfred Stengel; Ophthalmology, by Edward Jackson.

THE CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume III, Number 2, (April). Octavo of 212 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Published bi-monthly. Price per year: Paper, \$8; cloth, \$12.

The contents of this number are as follows: Murphy's Clinical Talks on Surgical and General Diagnosis; Three Cases of Ectopia Testis; Cholelithiasis; Acute Pancreatic Cyst; Duodenal Ulcer; Goiter; Tuberculosis of the Kidney; Vesical Papillomata; Amputation Neuroma with Ascending Neuritis; Neuroma of the Ulnar Nerve, Result of Cicatricial Compression Following Unrecognized Fracture; Neuroma of the Ulnar Nerve, the Result of Trauma Incident to Fracture at Elbow; Internal Hemorrhoids with Severe Bleeding at Stool, the Result of a Small Slit in a Hemorrhoidal Vein.

COXA VARA, Its Pathology and Treatment. By R. C. Elmslie, M.S., F.R.C.S., Orthopedic Surgeon to St. Bartholomew's Hospital, London. Oxford University Press, American Branch, 35 West Thirty-second Street, New York. Price, 60 cents.

A splendid essay, condensed but illuminating. It is well illustrated.

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

PUBLICATION } W. H. BREUER, M.D., Chairman
 COMMITTEE } S. P. CHILD, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE DISPENSARY TREATMENT OF DIABETES MELLITUS*

R. H. McBAINE, M.D.
 ST. LOUIS

The therapeutic means to combat the progress of diabetes and its complications consists, as is nearly universally agreed, of dietetic measures, combined with an accumulation of observations of the patient which will predict complications and thereby make possible their prevention.

Whether or not the dietetic treatment of the disease actually has a permanent curative effect is still a moot question, though it is certain that the neglect of this side of the disease encourages a rapid decline in the patient's health, and frequently permits the occurrence of complications, such as boils, infection, etc.

The dietetic plan carried out in the dispensary work of Washington University this year was very similar to that described by Dr. T. C. Janeway in the *American Journal of the Medical Sciences*, March, 1909, Vol. 137.

In the first place, it was our endeavor to render sugar-free every patient who presented himself for treatment. When the patients first came to the dispensary they were usually on a liberal diet, but after their first few visits the carbohydrates and the sugar were gradually withdrawn, until their dietary was very much as follows:

Breakfast.—Coffee, with 1½ ounces of cream; two cooked eggs, with ½ ounce of butter; 3 ounces of ham, or (in our own practice) a similar amount of meat.

Luncheon.—Bouillon, with one raw egg; 3 ounces of sirloin steak, chicken, leg of lamb, 1 ounce of bacon.

Vegetables from list (two tablespoons), with ½ ounce of butter.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting, held at Joplin, May 12-14, 1914.

Dessert, made with one egg and 1½ ounces of cream, in any form the patient desires, such as custard or other recipes as were suggested.

Six ounces of wine or ½ ounce of whisky or brandy.

Afternoon.—Tea, with ½ ounce of cream.

Dinner.—Any clear soup; 3 ounces of fish (salmon, shad or mackerel), with ½ ounce of butter; ¼ pound pork roast, beef, mutton, pork or lamb chops; salad, with ½ ounce oil dressing; 1 ounce cheese (English, pineapple, Swiss or full cream); 6 ounces of wine or 1 ounce of whisky or brandy, or demi-tasse.

Vegetables Allowed.—Asparagus, beet greens, brussels sprouts, cabbage, cauliflower, celery, chicory, cresses, cucumber, egg plant, endives, lettuce, mushrooms, radishes, rhubarb, salsify, spinach, string beans, tomatoes, vegetable marrow.

This is the diet published in the aforementioned paper by Dr. Janeway. To this we added in our work oysters, and in the case of Jewish patients, goose fat (the use of the latter was particularly encouraging).

In the dispensary work the restriction of protein was not done. Patients were instructed not to deviate from the lists given them and to bring at each visit to the dispensary a twenty-four-hour specimen of urine. The instructions were written for them on slips of paper. They were also encouraged to bring with them a list of the articles eaten.

The total caloric value of the diet just given is 2,850, and contains approximately the following food elements:

Protein	126 gm.
Fat	222 gm.
Carbohydrate	15 gm.
Alcohol	30 gm.
Total	2850 calories

On each visit to the dispensary, an estimation was made of the total amount of glucose present in the urine, and the total ammonia in twenty-four hours was computed whenever it was thought necessary.

Qualitative tests for acetone and diacetic acid were also made daily. A word of explanation as to the laboratory methods would not be amiss. They were as follows:

Urine was measured, specific gravity taken, and the usual routine examination made. Glucose was then computed by Benedict's method, which is one of the best and quickest quantitative methods for the clinician. The solutions required are:

Solution A—

Recrystallized copper sulphate..... 69.3 gm.
Distilled water to.....1,000.0 c.c.

Solution B—

Crystalline Rochelle salt..... 346.0 gm.
Anhydrous sodium carbonate..... 200.0 gm.
Distilled water to.....1,000.0 c.c.

Solution C—

Potassium sulphocyanid 200.0 gm.
Distilled water to.....1,000.0 c.c.

The solutions are mixed in equal proportions in the order in which they are given. Thirty c.c. of the mixed solution is placed in an evaporating dish of anhydrous sodium carbonate to increase the alkalinity. Then the solution is brought to a boil and the urine allowed to flow in from a burette as is the custom in the Fehling system. The advantage in this method is the ease with which the end-point of the reaction is read; that is, the complete disappearance of all the blue color. This point is very sharp, and accurate to a fraction of a cubic centimeter.¹

The test for acetone adopted, which is a very convenient one and easy to perform, is as follows:

Fifteen c.c. of urine are placed in a test-tube and there is added 1 c.c. of glacial acetic acid. After the addition of a few drops of freshly prepared solution of sodium nitroprussic, ammonium hydrate is layered above the urine and a violet ring appears at the line of contact.²

The test for diacetic acid was the time-honored ferric chlorid. The total ammonia was estimated by a new and very convenient method, as follows (method of Ronchese):

Ten c.c. are measured off from a twenty-four-hour specimen and placed in a flask; there is added 100 c.c. of distilled water, previously boiled, and then as an indicator, a few drops of ½ per cent. alcoholic phenolphthalein, stirring constantly. One-tenth normal sodium hydrate is run in from a burette until a pale rose color makes its appearance throughout the liquid. Ten c.c. of commercial formalin are now added (which has been neutralized if necessary) with phenolphthalein as an indicator, and again 0.1 normal alkali is added until the same rose reaction appears. This is the end-point. To the quantity of alkali used, after the addition

of the formalin, there is added 0.1 c.c. for each 3 c.c. required in the titration. This is for correction. Obviously, this sum equals the ammonia content of each 10 c.c. of urine expressed in centimeters of 0.1 normal ammonia. The sum is multiplied by 0.0017, to obtain the amount of ammonia in 10 c.c. of urine, and the quantity of ammonia for twenty-four hours is easily calculated.³

Realizing the importance of some means of determining the degree of diabetes, each patient was studied carefully and underwent a complete physical examination, with its accompanying examinations—blood, blood-pressure, history, etc. No definite scheme of classification of disease was adopted, but the following was borne in mind: Mild cases, or those which could tolerate from 60 to 100 gm. of carbohydrates daily without the appearance of sugar in the urine; moderately severe cases, or those which became sugar-free on a constantly restricted diet; severe cases, or those which continued to have glucose in the urine on restricted diet or even on restricted protein. In our work, protein was not restricted, nor was there attempted any of the oatmeal cure, potato cures or other complex diets which were not practical in a dispensary.

It was our aim to render each patient sugar-free, since it is only when diabetics are sugar-free that their tolerance for carbohydrates materially rises. It was also our object to watch carefully and prevent the occurrence of acidosis and other complications (provided this could be done on the aforementioned strict diet). When acidosis appeared, or gave signs of appearing, a certain amount of carbohydrate was added to the diet. The prevention of acidosis should constantly be borne in mind and the indication promptly met by returning to the diet a certain amount of carbohydrate, as well as the ingestion internally of a half ounce or more of sodium bicarbonate each day. This was the only medication used.

It is a well-known fact that a diabetic (or for that matter a normal individual) will show acetone and diacetic acid in the urine when suddenly deprived of carbohydrate food. It is also a recognized fact that a diabetic who is excreting large amounts of sugar in the urine will manifest acidosis on a diet liberal in carbohydrate, due to his inability to assimilate these in the normal manner.

Taking it for granted that it is the usual case of diabetes, a patient under treatment should retain his normal weight, or gain if there has been loss of flesh. The weight was carefully recorded in each case and effort made to keep it normal. We quote the following cases:

The case of J. B., 42, married, white, motorman, who presented himself at the dispensary for treat-

1. Benedict, S. R.: Jour. Biolog. Chem., 1907, vol. iii.

2. Lange, F.: Eine Ringprobe auf Ozeton, München. med. Wehnschr., 1906, lii, 1764.

3. Ronchese, A.: Nouveau procede de dosage de l'ammoniaque, Jour. de pharm. et de chem., 1907, 6th series, xxv, 611.

ment, Nov. 14, 1913, complaining of cramps in the abdomen and weakness. Past history uninteresting, except the history of appendicitis ten years ago, which was supposed to have recurred shortly before the patient applied at the dispensary, and it was in routine urinalysis prior to operation that glucose was discovered in the urine. The patient also had thirst and polyuria. He had lost 15 pounds in weight in the past six months. The subject was a well-nourished, muscular man, weight, 162 pounds.

Two days after application to the dispensary, urinalysis showed 6.25 gm. of glucose in a twenty-four-hour specimen, as well as acetone and diacetic acid. A trace of albumin was present and there were hyaline and granular casts. The carbohydrate was gradually withdrawn from his diet, and on the given diet glycosuria disappeared. From December 5, the patient having been glucose free, he was given 150 gm. of bread, in addition to his usual diet, for a tolerance test. Assuming the carbohydrate content of bread to be 55 per cent., the urine resulting from this test showed 9.9 gm. glucose, which, subtracted from 83.0 gm. (the amount of carbohydrate contained in bread), gives a tolerance of 73.0 gm. carbohydrate.

The patient has again returned to a strict diet for tolerance of oatmeal, the result of which was very similar to the foregoing. The weight on the last day of December was 167 pounds, a total glucose of 5.45 gm. in twenty-four hours. The patient was continued on a moderately strict diet and became glucose-free Feb. 25, 1914, and continued so without the sign of acidosis until the 25th of March, when the total ammonia in twenty-four hours rose to 2.7. At this time, it was interesting to note that the patient developed fluid in the right chest. My notes of the case end at this time.

A word in regard to the total ammonia. The object in estimating the total ammonia is to keep a quantitative record on acidosis, and as acidosis occurs, the ammonia rises accordingly, a conservative effort on the part of Nature is made to combat this complication. Normally, the ammonia in a twenty-four-hour specimen of urine is from 0.6 to 0.8 gm. for the average adult on a mixed diet. The upper limit of normal is 1.2 gm. In a healthy individual, the ammonia nitrogen represents about 5 per cent. for the total. This simple method of estimating the acidosis proved of great value to us in our work.

P. H., aged 66, widower, farmer. He came to the clinic complaining of grippe, Jan. 12, 1914. He had formerly been a patient in our dispensary in 1909, at which time glycosuria was noted and some treatment given. On present admission he showed no further interesting signs except those of mild chronic bronchitis. The urine was tested and showed 7 per cent. of sugar. I wish to pause a minute and make clear one point in regard to the sugar determinations in diabetes.

Seven per cent. of sugar means nothing; it simply means that a specimen passed at a given time had a known amount of sugar and hence no idea of a total for twenty-four hours, and it is the total for twenty-four hours that interests us, that determines treatment, and which can be compared with the amount ingested.

The patient was put at once on our carbohydrate-free diet, according to list given January 16, and showed 4 gm. glucose in twenty-four hours; no signs of acidosis. By January 30, or eighteen days after admission, he was sugar-free. In February he was

given a tolerance test of two slices of bread each day. Urine remained sugar-free. The highest ammonia estimation was 1.6. He was again put on a free diet and an accurate test of 150 gm. of bread was given. Urinalysis showed that no glycosuria resulted from this. From this day, the 6th of March, he took from 150 to 200 gm. of bread, without glycosuria and without signs of acidosis. It was evident in this case, within a very short time, that the proper diet increased the patient's tolerance, and there was marked improvement in his general health.

T. G., aged 49, laborer, married, white. He was admitted to the clinic Sept. 24, 1913. He gave a history of being a great beer drinker, frequently getting drunk and averaging 3 quarts of beer a day. His symptoms were loss of flesh—30 pounds—polyuria. Physical examination showed a marked alcoholic facies; his breath had an acetone odor; heart and lungs were negative; a very pendulous abdomen. He was put at once on a carbohydrate-free diet. The urinalysis test on admission showed acetone to be present and a considerable amount of sugar. An incomplete specimen prevented accurate figures.

The patient appeared again November 6, and was again put on a Janeway diet and presented the following urinalysis: 2,180 c.c. total; no acidosis; no glucose. He was then given 100 gm. bread for a tolerance test. The return from this was no sugar. In January the patient broke the diet rules and relapsed. On February 2 he returned and was given the diet mentioned, with a small quantity of rolled oats in the morning and from 150 to 200 gm. bread each day, glucose or acidosis never appearing; evidently a mild case due to diet error and easily corrected.

P. S., married, white, aged 51, a tailor; had been treated for glycosuria since 1911; came to the dispensary in December to see if he had sugar in the urine; sugar was present. He was placed on the usual diet. He returned again the middle of January, sugar-free, having gained 30 pounds in weight. The ammonia content in twenty-four hours was 1.37, and a few days later 1.89. He was returned to a strict diet, to which he apparently did not adhere, and on February 21, there were 13 gm. of glucose to a twenty-four-hour specimen. The ammonia was 1.5. Owing to the acidosis, the carbohydrate was now reduced gradually, the patient being allowed two slices of bread each day. A few days later he showed 3.5 gm. sugar, positive reaction for acetone, with 1.0 ammonia. In March the patient was put on a strict diet and soon became sugar-free. Ammonia was 1.5. In April, the patient remained sugar-free, but the ammonia was as high as 1.78. This case did fairly well on treatment, showed a great tendency to have acidosis, the only treatment being bicarbonate of soda. This patient did not show the same interest and intelligence in following the diet as some of the previous ones, though the result was very good.

M. S., aged 42, married, white; who was known to have had diabetes for several years, came to the dispensary Dec. 3, 1913. Twenty-four-hour specimen of urine, 1,580 c.c.; acid; clear; 1,020; 17.6 gm. glucose in twenty-four hours; no acetone, no albumin. She was placed on the diet list given but allowed to retain two slices of bread each day, the sugar remaining about the same amount. On the 19th of December she was put on the strict diet, and showed a total of glucose on this diet of 13.7 gm. for twenty-four hours; no signs of acidosis. The patient at this time was instructed to have one day each week as a fast day, on which she could have only coffee, perhaps a little brandy. January 6, glucose 23 gm., twenty-four hours. The fast day was replaced by a green day, allowing only green vegetables one day a week, glucose remaining constant. At this time, after some investigation on the part of the patient,

she obtained at quite a high rate, some gluten flour, and prepared for herself some gluten bread according to a very excellent recipe which she had. This bread was analyzed in our laboratory and had almost as much carbohydrate content as ordinary bread. This is mentioned here for the purpose of stamping our disapproval of the use of gluten bread or any other variety from any source whatsoever, unless it is subjected to chemical analysis. Now, the patient showed a total ammonia of 2.38, the condition remaining about as stated. The ammonia fell to 1.4, and on February 11, glucose was as low as 9.5 gm. On March 25 glucose was only 4 gm. in twenty-four hours. The weight on the latter date was 195 pounds, a considerable gain since admission.

G. S., aged 58, married, white, housewife; came to the clinic Nov. 13, 1913, with a history of pain in the back and abdomen. Past history showed that she had diabetes for eight years and had always had marked polyuria and thirst, with edema of the legs. Habits good, past history negative, family history negative. For the past two weeks had been having marked lumbar pains, pains in the epigastrium, and was very much below par in weight, there having been a loss of 40 pounds since the onset of her disease. Examination showed a large, obese, German Jewess, suffering from pyorrhea alveolaris; heart, second sound was accentuated, abdomen was pendulous, showed a scar of some previous operation of the uterus (said to be for a tumor fourteen years ago). She was very tender in the gall-bladder region, though there was no mass, tender also in the appendix region. The patient came to us from the Washington University Hospital, to which she had been admitted July 15, and on very careful diet showed no carbohydrate tolerance and did not become sugar-free. The urine on discharge from the hospital was 2,500 c.c.; 145 gm glucose in twenty-four hours. Now the Wassermann reaction was taken, which was negative. She was put at once on a carbohydrate-free diet and glucose fell to 25 gm. The patient then refused any further dietetic treatment and she was discharged from the dispensary. She returned to the dispensary Dec. 1, 1913, with 3,880 c.c. of urine, marked reaction of diacetic, acetone, albumin, hyaline and granular casts, and a total glucose of 170 gm. in twenty-four hours. It was again demanded that she follow the diet list given her, and which she did. Then glucose began to fall, acetone only was present, albuminuria persisted, and glucose in twenty-four hours was 45 gm. On February 13 urine showed 26.9 gm. of glucose in twenty-four hours, acetone remaining positive and the ammonia was 0.8 gm. The patient had been on a strict diet in the interim. Ammonia rose at times as high as 1.64. She gained 2 pounds in weight and then again became careless with her diet. This case was the most unsatisfactory one in the group and proved beyond doubt that benefit can only be derived from dispensary treatment if patients can be persuaded to follow the diet.

The next case is that of W. R., aged 55, white, single, a salesman. He presented himself to the clinic Oct. 28, 1913, for a sore toe of five years duration. Personal history showed that he had formerly been a heavy drinker. He had no other symptoms except beginning gangrene in the right great toe. I did not see the patient again until December 1, when he presented himself. There were 1,970 c.c. of urine, specific gravity, 1.013, urine clear, acid, no albumin, 18.3 gm. glucose, no diacetic acid, no acetone. Following this urinalysis the patient disregarded instructions, drank beer to excess, ate freely of bread and potatoes. He came in with 1,500 c.c. of urine, and, strange as it may appear, no glucose. He was, however, persuaded the necessity of treatment and again put on a free diet, and remained glucose free. He was then given 150 gm. of white bread, and returned

December 12 with 2,150 c.c. of urine, no glucose, a trace of albumin, no acidosis. There was marked improvement in the toe. Unfortunately our control of this patient was not sufficient to get any further tolerance test. It is certain that he had a tolerance for 150 gm. bread, or, in other words, 80 gm. carbohydrate. He came in again December 27, with a trace of sugar. He had been eating according to our instructions 150 gm. of bread each day. The bread was reduced, and when seen last, the 17th of January, was still glucose free and his total ammonia was 1 gm. This was evidently a mild case and easily corrected.

We have no new things to offer you in conclusion. None of the more elaborate means of dietetic treatment were attempted. These cases are presented to you with the sole idea in mind of demonstrating that diabetes can be treated in the office, in the clinic and in the dispensary with a considerable degree of success. In several of the cases, phenolsulphonophthalein test was made and showed no deviation from the normal except in those cases which had accompanying nephritis, where there was decrease in the output. The Wassermann reaction was negative in all cases.

In conclusion, I wish to express my thanks to Dr. Robinson of Washington University for the many kind suggestions and help with the patients. I wish also to express my thanks to Dr. Larramore, who took charge of the laboratory end of the problem, and whose assistance was indispensable.

314 Humboldt Building.

DISCUSSION

DR. G. H. HOXIE, Kansas City: Diabetes is not the name for a simple disease—but rather a term covering several conditions, the common symptom of which is glycosuria. Therefore before we can institute intelligent treatment we must form a definite notion of the pathogenesis of the case before us. Some cases require nothing more than a proper diet to enable them to raise their tolerance for sugar. Other patients seem to be loaded with diastatic ferments, which unless saturated or neutralized tear down the body tissues. In this latter class of cases Dr. Knerr of Kansas City has had brilliant success by feeding raw starches and by neutralizing the acidosis. Therefore the presence of diastatic ferments in the urine and the acidity of the urine should be carefully investigated before outlining a carbohydrate-free diet. Again the condition of the pancreas should be studied by examining the stools for undigested fats and similar evidence of insufficiency. And still again the condition of the pituitary gland may be responsible for the glycosuria and should at least be considered. In the absence of a definite lesion Dr. McBaine's procedures are excellent and should bring relief to his patients.

DR. R. H. M'BAINE, St. Louis (closing): I quite agree with what Dr. Hoxie has said. The study of diabetes is more than the study of the quantity of sugar in the urine or the patient's ability to tolerate the sugar, and in some of the histories which time did not allow me to include in the reading, this after-work was done. Many of the other cases, which were too complicated to be handled in our dispensary, we sent to the hospital. Perhaps we can give you a report on those cases next year. I think that in some the estimation of the total glucose in the blood was attempted.

MEDICAL LEGISLATION *

CHARLES P. EMERSON, M.D.

Dean, Indiana University School of Medicine

INDIANAPOLIS, IND.

When I heard the meeting was to consider the subject which was presented this evening, it was a great delight to me that I was to be in the city to hear the papers that were to be read, because we in Indiana have this problem before us. Our State Medical School is the only medical school in the state, and it is the *State* Medical School. We, therefore, feel that it is our duty to instruct the public of the state and, if possible, the lawmakers—instruct them in such a way that the laws will be, as we think, suitable. I do not say that the public think it is our duty; I do not say that the lawmakers think that it is our duty; but we feel that the one medical school in the state and the State Medical School has as its special function the instruction of the public and especially the lawmakers concerning public hygiene and public health in order that the laws enacted may be rational laws, created not for the benefit of any one class, but for the whole people. Allow me to say that I am delighted to have been present this evening and to have heard the paper that has been read.

Why is it that physicians are still following the practices and still living in the times of their grandfathers? I do not know. We don't wear the hats nor coats, nor do we carry the canes that our fathers and grandfathers used. In so far as our practice toward the public is concerned—I am not speaking now of the way we treat the patient, but so far as our attitude to the public is concerned—physicians still feel that it is their duty to be very quiet, to be silent. We cannot do that now. Why not? Because medicine has been advanced and at such a speed that there is no exaggeration to the statement that medicine has advanced more in the last fifty years than in the preceding twenty-five hundred. The advance has not only been in the therapy of the individual patient, but in prophylaxis, in hygiene, in preventive medicine, and, therefore, we doctors cannot maintain that very dignified silence on this matter that has been our attitude in the past. What is the matter? There is no doubt but that any increase in knowledge means an increased responsibility. The man who knows best what ought to be done under certain circumstances owes it to the public to tell them what ought to be done under those circumstances. There is no doubt that the medical profession is the most self-sacrificing of all professions so far as indi-

vidual practice goes, in my opinion. Yet no profession has the appearance of evil more than the medical profession. That appearance is produced by the silence it maintains as an organized body on medicine and public health, and why do we maintain this deceitful—for it is deceitful—this very misleading attitude toward the public health? We realize that it is our duty to give the public the benefit of that which we know. We know that the more education we give the public the less our benefit will be under the changed conditions, but we have not admitted the public to that view.

I remember a good old doctor up in New Hampshire saying that whenever he educated the public he injured himself. "When Eberth discovered the typhoid bacillus," he said to a friend of mine, "I saw it was my duty to get better water in the city and I went on a crusade against the water-supply until that water-supply was improved. Formerly I made thousands of dollars from my typhoid fever practice, and now I make very little because, as a result of my teaching, there is not very much typhoid. I used to depend on three or four thousand each winter from the diphtheria practice. When diphtheria antitoxin came into general use, I first educated my patients to it—they were adverse to its use in the beginning—and now instead of having cases which go on for days and weeks, making calls every day, a few visits suffice and, therefore, my diphtheria practice is almost gone. I used to have a large practice from minor surgery in the mills of the town where I practice, but I saw that most of that minor surgery was unnecessary, so I made myself obnoxious to the owners of those mills until they put in appliances that would prevent these accidents, and now my minor surgery amounts to very little. In other words, the more I have taught the more I have limited my practice, but I knew it was my duty and I have done my duty in this particular."

There is not a single doctor, I believe, that is not doing his best in this particular. Certainly not a member of the state societies, nor of the county societies, because their membership in these societies proves that they have that purpose. But there are very few of them who have not hidden their light under a bushel so that the public does not "get" their attitude. Each advance in medicine, each increase in medical knowledge imposes new responsibilities on the medical profession. Our modern preventive medicine, our modern social service—which is not a different, not merely a superimposed function of our clinics, which is no fungus growth at all—all of this work in social service, in preventive medicine, etc., is just as truly the result of the research laboratory as our various antitoxins and various drugs that are named by words of twenty or twenty-five let-

* Stenographer's report of remarks before the St. Louis Medical Society, April 25, 1914.

ters. Each advance in medicine imposes new responsibility on the medical profession. Are they ready to meet it? Are they ready to accept it? For instance, if there is one piece of medical research which we adopt in clinical diagnosis and insist on our students studying, it is that piece of research by Koch, the result of which was the discovery of the tubercle bacillus, a most painstaking, accurate and scientific piece of work which has scarcely been modified. The results of Koch's discovery were therapeutic measures, measures for sanitation in the care of tuberculosis, new health laws concerning spitting on the streets, new ordinances of our state boards of health concerning the cleaning up of houses that had been inhabited by consumptives, a new social conscience concerning the consumptive and the practice of spitting in general. All of these were just as truly the result of that scientific work in Koch's laboratory as any other therapeutic measure for which the discovery is responsible. It is the duty of the medical profession that the public have the results of these discoveries; it is their duty to see that the public protect themselves; it is their duty to continue this crusade which has already cut down over 50 per cent. of the cases of consumption in some cities, until there shall be very few cases indeed.

It was a splendid piece of research work that demonstrated the importance of the typhoid bacillus, and just as we have proper prophylactic vaccine for typhoid fever we have the crusade against filthy water, filthy dairies and filthy grocers in handling green vegetables not cooked in preparation, and these are also the fruits of this discovery by medical research, and it is the duty of the doctors, who understand this better than anybody else, to see that the public have the benefit of their knowledge. This education of the people can be brought in other parts of the country to the point which it has reached in St. Louis, where typhoid is one of the rare diseases. It was a splendid piece of research work that Schaudinn did in his discovery of the organism of syphilis. We have several results from that discovery, the discovery of the fact that many diseases formerly not known to be associated with this disease were caused by it, and its effect on the second generation, and since nobody better than doctors understand the importance of this disease it is their moral duty to see that the public is educated concerning the dangers of this disease and that the proper laws are passed protecting marriage, and protecting the child that will in some measure mitigate the terrible scourge from which America is now suffering. It was a splendid piece of research work by Neisser when he discovered the organism of gonorrhoea. This led to many discoveries in medicine and surgery of the part it plays in the causation of different diseases,

and it certainly is the duty of the doctor to be the moral crusader, to be the moral teacher of the young men who come under his care as to the dangers of this disease; and is not only a duty which he may or may not assume at will, but it is a duty that he cannot avoid unless he desires later on to be termed a traitor to his public trust.

So it is that every advance of medicine imposes new responsibilities concerning new ordinances on the part of our state boards of health, concerning new state laws, and it is only our medical societies, it is only our medical schools who have the proper knowledge whereby they can give the public the results of this work and thereby teach the public how they can protect themselves. Nobody else can do it as well as they; should anyone else try, it will be borrowing thunder. Medicine has advanced very, very rapidly. Now, are we keeping up with it as medical organizations? As individuals, yes; but as members of the medical organizations to which we belong, which are the only engines that can produce changes in the public sentiment, in the laws, we are certainly not giving to the public that which we owe them, and although we may not recognize our guilt now it certainly will be held against us later by those who will realize their loss because of our unwillingness to appear as those teaching, educating, favoring the enactment of and seeing to the enforcement of the laws in question.

What are some of these medical advancements that we want to put before the public? I have named a few, but it all hinges on the changed attitude concerning our therapeutic measures. We now recognize that we know nothing about disease, but we know more and more about diseased patients. We recognize now that there is no such thing as disease, we never saw pneumonia under the microscope and we never saw typhoid fever walking up and down the street, but we recognize that John Smith has pneumonia and that Mary Brown is suffering with typhoid fever. This personification of processes under the name of disease has led us astray. We recognize that we know practically nothing about typhoid fever as a disease, but we know more and more about each patient who is suffering from typhoid fever. You cannot mention one symptom of typhoid fever. I wish you would try. I doubt if you can. But you can mention a good many phenomena that patients with typhoid fever present—these are symptoms not of the disease; for instance, rise of temperature which we call fever is not a fever, but a part of the man's reaction against the infection. I wish to enlarge on that a little in order to come back to the problem with which we started. The rise of temperature is not a part of the attack, but a part of the defense. Those patients who are so

sick that they cannot defend themselves by fever have what we call an afebrile type of the disease. This is a serious type because the patients are unable to protect themselves by that mechanism, a part of whose effort is shown in the rise of temperature. We realize, therefore, that every drug which depresses temperature weakens the patient's ability to withstand the disease, because we are merely defeating Nature's own aim in trying to fight that infection; and that our therapeutic measures should be directed so to improving the resistance of the patient that such a high temperature will no longer be necessary and therefore the temperature will drop. We now recognize that our typhoid tubs are valuable, not because they lower temperature, but because they stimulate the circulatory and other forces of the patient. We recognize that cough is no longer a symptom of disease, but is a defense of the system in the effort to get rid of sputum. We recognize that sputum is not a part of the disease; sputum is an attempt on the part of the body to drive out a toxin. We recognize that the rise of leukocytes is a protective measure in the fight against disease. We recognize that the high blood-pressure that a man who has renal disease shows is not a part of the disease, but is an attempt on the part of the body to overcome certain obstructions to circulation in certain organs of the body; and that our endeavor should not be to depress the blood-pressure by nitroglycerin, because then we would be defeating Nature's own defense against the disturbance that there is in the circulation of the body. In other words, the more we know about disease, the more we recognize that the manifestations formerly called symptoms are the results of the mechanism of the body for the driving out of infection, and we shall have to go far into the psychology of the germ to understand what the diseased part of the condition is. In other words, the whole problem is one of defense so far as we know it, and not of attack. If a man shows no symptoms, we recognize that the organism is not attacking severely, but so soon as the symptoms begin the man is fighting the organism.

The point is this: In the social organism we have disease, and it is in this fight of the social organism against disease that the ordinances of the state boards of health and our laws are directed and we must be very cautious that in our dealing with diseases of the social body we do not defeat the defense rather than overcome the attack, for certainly the defense of the patient should be strengthened.

Now, why is it that so many of these thought curists, etc., are getting such a hold on the public body? Are we asleep, or is it the defense of the body politic against our selfish silence? Is it our apathy that is at fault? I fear it may

be. I fear that in the case of the social disease there is a worse time coming to us than there has been in the past. We recognize, of course, and they have made the statement, that these various curists, etc., whether mental or not, have already reduced the number of pay patients to about 50 per cent. They have not reduced the number of patients in the free dispensaries. They have not appealed to the poor who come to our clinics, but certainly if any of us study the large churches they build, and study the lists of their members we will see that they have a large following in the financially endowed part of the community. Now what is the trouble? Should we merely rest our hands and say, "It is all wrong, it is all wrong, it is all wrong;" or should we study our own attitude, should we study our own activities as organized bodies of medical men and see if the trouble is not in us and that to a certain extent the social body is protecting itself, that we must change ourselves before we can be of much more help to the public; so change ourselves by living out our true nature as a public-spirited profession that we no longer stand in an ambiguous light before the public.

In this connection, I would like to speak of the growth of social service, which I believe is one of the most important ways that the medical profession can show its usefulness to the public. We realize that in our dispensaries we can look out for a good many patients in the sense that we can give them medicine, but only about three out of every ten get any good out of these public dispensaries. Now what is the trouble? The trouble is that the disease is not to be reached in just that way, that among the poor especially, and just as truly among the rich, the disease is one of the social body quite as truly as it is of the physical body, and that the manifestations of the physical body are only a part of the disease which manifests itself so much more broadly in the social body. For illustration, I will speak of four cases of stomach trouble that came to the dispensary. The first man had stomach symptoms and stomach symptoms alone. His treatment, of course, was stomach treatment. The next had stomach symptoms and nothing else, but his trouble was that he had an involvement up in the rear part of the nose, the sphenoidal sinuses, and the constant leaking downward of pus led to disturbance in the stomach. He did not need stomach treatment, but nose treatment. The next man had practically the same symptoms and no others, but the trouble with that man was that he had been eating poor food and he was eating poor food because his wife did not know how to cook. Now, you can treat that man's stomach all you will; unless by some sort of mechanism you can reach that wife and teach her how to cook, you are not going to

cure that man. The fourth man had only stomach symptoms, no others; but the trouble with him is that he is worrying so about his poor, wayward boy that he cannot sleep and cannot digest his food and therefore has a disordered stomach. That man worries more, digests his food worse, stays awake more, poor digestion, poor sleep, more worry and poorer digestion, a vicious circle, and presently we have a man who comes to the dispensary with a chronic gastritis. As a medical profession, we must reach through some special instrument that man's boy and help him, and just as soon as he realizes that his son is being helped just a little bit, he realizes that the burden is partly borne for him and he will begin to sleep better, digest better, sleep still better and digest still better.

Now I am not trying to waft my way through the clouds of idealism which belong not at all to the medical profession. I have merely given a few illustrations of the fact that we realize now that in treating a case we are treating not merely the man but his wife, his children, his place of employment or the house he lives in. It is no longer true that a man's body is that part of the world which is surrounded by his cuticle. The man who comes to our dispensary is a man who has a wife and children, as a rule, who has a place where he works and a place where he plays. We cannot cure the lead worker who has lead palsy by giving him medicine; we have got to cure his work of the lead dust and then the man will get well. We cannot cure a man of alcoholic gastritis by giving him medicine, we have to change his habits. We cannot cure a man of myocarditis whose place it is to lift heavy loads, etc., unless in some way we cure his work, i. e., find him an easier job.

Now, the point I want to make is this: That this social service work is just as truly the flower, the fruitage of medical research as any antitoxin or vaccine that is now on the market, and unless the medical profession as an organized profession is ready to stand up and try to cure the pathologic conditions of the social body in which our patients live and move and have their being, they will be traitors to the cause. Doctors know more about the importance of hard work in relation to the heart than anybody else; therefore, doctors cannot deny their duty to take some interest in the laws concerning hard work. Doctors know more about the evil that bad tenements can have on their patients better than anybody else; and, therefore, doctors cannot deny their moral obligation to take some interest in the new housing laws. Doctors know more than anybody else about the shortening of life that comes from certain occupations, certain trades, and, therefore, doctors cannot deny their moral

duty to see that there is a workingman's compensation which increases in proportion to the danger and hardship involved. Doctors know more than anybody else of the danger that comes from venereal diseases, and, therefore, doctors more than anybody else should be moral teachers, and they cannot deny their obligation in this particular. Doctors know more than anybody else the danger of bad water-supply, the danger of infected milk, the danger of bad hygiene, and are, therefore, under obligation to the public to use their knowledge to see that laws which really will be of benefit to the public are enacted. They know better than anybody else, and doctors cannot shirk their duty toward the suffering as we are now. We must be ready to go before the public and educate them, go before the legislatures and plead for the proper laws. I believe that one reason for the social diseases which we are now suffering in all these bodies is because we have been neglecting our duty, and that when the medical profession sees that its superior knowledge on these subjects imposes greater duties on it so far as the public advantage is concerned as well as the patients, individually, are concerned, just so soon will we have less to complain about so far as our standing and the practice of medicine go.

Hume-Mansur Building.

CONGENITO-MECHANICAL DILATATION OF THE COLON

FRED WARREN BAILEY, M.D.
ST. LOUIS

The selection of this title is based on the findings of the case herein reported and for the purpose of distinguishing it from the majority of published cases of Hirschsprung's disease, the questionable etiology of which is acknowledged by the wide acceptance of the term "idiopathic dilatation of the colon."

"Nothing exists without a cause" and the use of the term "idiopathic" (meaning "one's own disease") implies only that we lack accurate knowledge of the cause of the condition and not that a cause does not exist. Scientific men are rapidly eliminating the term and will ultimately do so altogether, and for this reason all cases which come under the so-called idiopathic class should be promptly reported. One such case may not help materially, but collective evidence is far more conclusive; hence, the author's contribution.

History.—Baby D., referred by Dr. Harry Wood, Batchtown, Ill., was first seen eighteen months ago. She was then about 1½ years old. Her parents gave rather an indefinite history of her having been constipated since birth. During an acute attack the family physician had been called and discovered an imper-

forate anus with a minute rectovaginal fistula. She was brought to St. Louis and operated on by a well-known surgeon. Her obstipation continued, apathy and listlessness were marked, and development greatly retarded. All efforts by her local attendant to secure normal bowel action were defeated by the persistently narrow orifice of exit within the vagina. Toxemia and inanition combined to accentuate her nervousness to such a state that the administration of a dose of laxative, or an enema, was so exhausting to both patient and parent that she was consequently permitted to go without both as long as possible. At times, five to fifteen days were permitted to pass without any relief, when after repeated efforts there would be a continuous but meager discharge for days.

Family history entirely negative.

Physical Examination.—The patient appeared to be 1 year of age. She was 1½ years old. Her skin was dry and lacked pliability. The skeletal development did not suggest rickets and she was mentally and physically hypersensitive. The mucosa of her mouth was pale, and the entire picture suggested the anemia of inanition. The sternum was prominent along its upper half and the costal margins were spread. The abdomen was prominent and bulging, particularly on the right side. Liver dullness shaded into a flat note two inches below the costal margin. The bulging area had a doughy resistance on deep palpation, but no definite outline could be determined because of the resistance and evident tenderness. The superficial abdominal veins were traceable.

The normal anal site was represented by a shallow dimple, the center of which was very firm and resistant. The hymen was absent and the posterior vaginal wall at a point three-fourths inch from the orifice was perforated by an opening which barely admitted a grooved director and led into the rectum. Palpation in the posterior fornix revealed a putty-like insensitive mass.

The diagnosis being evident and the cause obvious, it was determined to attempt to relieve the acute condition, if possible, by enemata and medication, build up the child by a careful dietetic regime and prepare her for operation.

Under local anesthesia, the opening in the posterior wall of the vagina was gradually dilated in four stages. The colon was then flushed repeatedly, and temporary relief obtained. The parents returned home with the child, continued the treatments and dietetic suggestions and she improved slowly, but every few weeks she suffered attacks of acute colitis followed by obstipation, which checked her progress.

On Oct. 24, 1913, when 3 years of age, she was brought to St. John's Hospital. The rectovaginal fistula was the same size as at my first examination. It was determined, therefore, to locate the anus at its normal site and secure free drainage of the distended bowel preparatory to other operative measures.

By irritating the skin over the anal site, the semblance of a sphincter contraction could be seen. Following a crucial incision, the flaps were retracted and a visible dissection made through three-fourths inch of fibrous and areolar tissue until the probe within the fistula could be felt through the rectal wall. A circular incision one-half inch from the margin of the fistulous opening in the vaginal wall was now made and the neck of the tract infolded and ligated. This was now lifted and dissected down to meet the new anal canal into which it was drawn by a curved hemostat. The rectum became normal in size abruptly, was freed for a distance and attached to the anal margin with interrupted linen sutures, after four stay sutures of catgut had been placed subcutaneously to relieve the tension on the mucocutaneous suture line. The vaginal wound was closed without drainage and both wounds healed by first intention.

The sphincter ani were present though attenuated and acted sufficiently to control the bowel on the second day when the catheter was removed. On the third day the sigmoid was gently flushed with tepid tap water and an almost unbelievable quantity of scybalous and putty-like masses removed. This was repeated on the fourth and fifth days with similar results. Up to the beginning of the eighth day she was bright, cheerful, hungry, slept well and her bowels had moved regularly three times daily since the fifth day with sphincter control. On the morning of the ninth day she became restless and cross and developed a continuous diarrhea which could not be checked. Fluids were given her ad libitum, opiates administered and the colon irrigated with mild astringents, but the diarrhea continued, anuria developed and she died on the eleventh day. During her entire lifetime and final illness vomiting was absent.

Autopsy revealed an interesting anomaly in that the sigmoid and cecum were completely transposed. The entire pelvis, with the exception of the miniature uterus and adnexa and a shrunken bladder, was filled with the dilated sigmoid and rectum, the enlargement extending from a point opposite the posterior vaginal fornix, obliquely upward through the right iliac fossa to the normal site of the hepatic flexure where it began to graduate into a less dilated transverse colon, which was directed across from right to left and down into the left iliac fossa where rested the cecum and appendix. As seen in Plate 1, the transverse colon was but slightly dilated, while the ascending colon and the cecum were undergoing a moderate distension.

Specimen.—In spite of the fact that for over two days there had been a continuous and profuse diarrhea, the amount of fluid and fecal contents of the colon were just as exhibited in Plate 1. Through an error it was opened before its weight was determined. The mesentery was several times its normal thickness and the mesenteric glands greatly enlarged. The veins over the entire surface were dilated. The distention of the rectum extended to a point one inch from the original fistula. The plates give a better idea of the gross appearance than can be expressed in words. The entire colon, including sigmoid and rectum, was thirty-seven inches in length. The diameter of the recent specimen, at the narrowest part of the transverse section, was one and one-half inches; at the widest point of the sigmoid, five and one-fourth inches; at the cecum, three and one-fourth inches, and the ascending colon, an average diameter of three inches. The distended section shows areas of opacity and diminished luster of the serous coat. There were no adhesions to surrounding structures and merely an omental fringe along the transverse colon. The contents of the sigmoid sac were typical. The surface of the mucosa presented numerous ulcerated areas, varying from pin-head size to a diameter of one-half inch, penetrating to various depths, even down to the circular muscular coat. The mucosa between these ulcers was well sprinkled with brownish-yellow pigmented elevations. Section of the bowel wall shows chronic inflammatory changes of the inner coats and peritoneum, with round cell infiltration and well marked hypertrophy of both muscular layers.

In 1908 a complete list of reported cases of Hirschsprung's disease was published in a very able monogram by J. M. T. Finney in *Surgery, Gynecology and Obstetrics*, in which he reviewed over 200 cases. As his classification is generally accepted, I have taken the liberty of quoting and deducting therefrom. The cases are divided into two classes: (a) infancy, (b) adult (the pseudo or delayed type).

Ten different hypotheses are advanced, and, briefly stated, are as follows:

1. Long mesentery, permitting torsion and obstruction.

2. Both dilatation and hypertrophy are congenital, the former being primary, and the latter secondary and functional (Hirschsprung).

3. Colitis followed by stasis with resulting dilatation and hypertrophy.

4. Elongated colon forming loops, gaseous distention, stasis, dilatation and hypertrophy.

5. Idiopathic, those in which no evidence of past or present obstruction or anomaly can be found.

6. Congenital aplasia in the colon above the rectum.

7. Spastic contraction of the sphincter.

8. Neuropathic, producing neuromuscular defects.

9. Valve formation in intestine.

10. Pathological changes in the pelvic viscera, producing mechanical obstruction.

To which the author adds,

11. Congenital defects at the anal opening.

For a clinical description of diagnosis, pathology and treatment, reference to Finney's paper is suggested. For the purpose of refreshing our memory they are discussed here briefly.

DIAGNOSIS

The disease is more frequent in boys, in the ratio of $3\frac{1}{2}$ to 1. The course is irregular, depending on the time of its development and the rapidity of its progress. The true congenital type which shows early in infancy is characterized by abdominal distention and obstipation. The amount of distention varies in the different types, in some remaining permanent, in others disappearing entirely during attacks of diarrhea. The child becomes emaciated, pale, fretful and anorexic. The abdominal distention may be so severe that palpitation of the heart, respiratory and circulatory disturbances may occur. Constipation and diarrhea alternate, the periods of obstipation lasting as long as two or three weeks. Visible peristalsis may be present. The tumor is usually palpable, varying in resistance from a firm, well-moulded, movable tumor to a soft, indefinite mass. It is evident that no definite line of symptoms can be anticipated, for every case must necessarily vary in proportion to the degree of distention, compensatory hypertrophy or obstruction and the extent to which the disease has progressed. Our main reliance for early diagnosis should rest in roentgenology rather than in the exploratory incision.

PROGNOSIS

Unfavorable in the young. If not too far progressed and elimination can be kept up and toxemia prevented, the intra-abdominal

changes incident to growth may so alter the relations of the colon that improvement may occur. Surgical intervention in selected cases offers the greatest hope of ultimate recovery. When fatal, death occurs from toxemia or perforation at an ulcer site and peritonitis.

TREATMENT

As cited by Wilkie, medical treatment is of value only when compensatory hypertrophy is efficient. If an obstruction is present and can be relieved, belladonna and pituitary extract may be of value with local irrigation by copious enemata. Electricity and massage are of doubtful efficacy. In the advanced type where ulceration is present, massage is contra-indicated. Surgical treatment, when indicated, should be instituted before profound toxemia is present. The toxic state becomes especially noticeable when the mucosa has become ulcerated and the submucous lymph channels exposed directly to the bowel content. The indications are to determine the cause, remove it if possible, diminish the toxemia by local irrigation of the dilated colon, and, when the physical condition permits, remove the intestinal reservoir, reestablish intestinal continuity or, failing in that, an artificial anus. The operations which have been suggested include intestinal puncture with drainage, colotomy, colostomy, colonplication, colopexy, bowel switch, entero-anastomosis or excision of the dilated portion of the colon.

PATHOLOGY

The mucosa is thickened and infiltrated, presents numerous ulcers which extend to the circular muscular coat and yellowish-brown pigment spots. The submucous and intermuscular areas show round-cell infiltration, the circular and longitudinal muscular coats and serosa are thickened in proportion to the degree of hypertrophy, and chronic inflammatory processes through which the intestine has passed. Ulceration may continue to perforation and local peritonitic lesions are sometimes found at autopsy.

My original intention to present this case in report form without comment has been changed by the striking similarity existing between most of the hypotheses advanced, in the etiologic study of the disease, by various authors. Hypotheses 1, 4, 6, 7, 8 and 9 accept some neuropathic or mechanical defect as the cause of the dilatation, in all of which the predisposing condition may exist at birth. Hypothesis 2 (Hirschsprung) presumes both dilatation and hypertrophy to be congenital. Hypothesis 3 credits colon stasis following acute attacks of colitis as the primary cause of the dilatation and hypertrophy. It is possible that the author of this hypothesis was studying a case already developed, suffering its periodical diarrheic attacks. Hypothesis 5 denies the existence of

any anomaly or obstruction and is the only true idiopathic supposition suggested. Hypothesis 10 describes the pseudo type, obstruction resulting from pathologic changes in the pelvis. In all but one, acknowledgment is made that the dilatation and hypertrophy are secondary to obstruction, or some interference with the normal physiological action of the colon, and even the one excepted, does not deny the probability of some mechanical defect, although the term "idiopathic" presumes the absence of such a condition. Most authors accept the opinion of Hirschsprung that all are congenital in origin, or at least that some defective development or anomaly predisposes the patient to stasis or obstruction. This, I believe, should apply to all well-developed cases of the classical type, but should not be confused with the type of colon dilatation often seen at autopsy in those beyond middle age, who have been subject to prolonged stasis (the so-called pseudo type). It is an accepted fact that cases of true Hirschsprung's have, under careful attention, continued to live in comparative comfort to an advanced age, but the majority of cases pass rapidly to a state of invalidism that demands relief.

The case herein reported is unusual in that the cause of the condition is quite easily demonstrable and needs no hypothetical evidence. The imperforate anus, with its meager vaginal substitute outlet of less diameter than the patient's urethra, and the other evidences of anomalous development, transposition and fetal-sized pelvic organs, prove the origin, enable one to account for the progress of the disease to its termination with accuracy and justify the title selected, "congenito-mechanical dilatation of the colon."

I see no reason for attempting to prove any particular hypothesis. Each case reported in which the author accepts some mechanical interference with the normal physiologic activity of the colon or sigmoid as its cause is entitled to a favorable reception. It matters not whether such an interference is due to a long mesentery, permitting torsion, an elongated colon forming loops and gaseous distention, congenital aplasia, or neuromuscular defects producing stasis, valve formation or visible almost complete obstruction at the outlet, as in this case, the principle involved is similar in all, the progress and symptoms identical, and the end result the same, unless subjected early to scientific treatment, whereby the cause can be attacked and removed. In this, as well as in the large majority of our more or less obscure diseases, the fulcrum from which successful treatment must operate is an early diagnosis. If physicians, to whom is intrusted the care of babies, would give the same diligent study to normal elimination as to normal feeding, many conditions that later become gravely complex would be detected in

time to permit the application of preventive measures, thus adding one more stone to the monument of preventive medicine, the erection and completion of which should mark the zenith of our ambition.

CONCLUSIONS

1. Megacolon, or dilatation of the colon with hypertrophy of its coats, may be due to any congenital defect that produces stasis either through mechanical or neuropathic interference with normal physiological action of the part affected.

2. Comparison of the pathology found in the author's case, where congenital anomalies and mechanical defects were clearly demonstrable, with that found in cases of so-called "idiopathic" origin encourages the belief that at some stage of development these cases have been subjected to some stasis-producing influence and that the term "idiopathic" is used apologetically.

3. No denial is made of the congenital origin of true Hirschsprung's disease, but one is inclined to believe that the majority of reported cases of Hirschsprung's disease are the direct result of mechanical defects of congenital origin, and that the hypertrophied muscle coats, thickened serosa, ulcerated, pigmented mucosa and dilatation are due directly to these causes and should not be termed "idiopathic."

Metropolitan Building.

DISCUSSION

DR. JOHN DEAN: About a year ago I had an opportunity to study a case of Hirschsprung's disease with Dr. Rassicur, and it was my idea then that all cases of Hirschsprung's disease were idiopathic and that the reason Hirschsprung wrote about this disease was that he had never been able to find a tangible cause for this dilatation. Some, as Dr. Bailey has brought out, blame the long mesentery, others blame obstructive diseases, but in Hirschsprung's cases these causes were not very clearly made out. I believe that the case Dr. Bailey reports is one of hypertrophy and dilatation of the colon secondary to obstruction of the rectum, and that it is not a case of congenital hypertrophy of the colon. The chances are that at birth this baby's colon was about the size of any other colon at birth, but consequent to obstruction hypertrophy and dilatation took place, and this dilatation and hypertrophy took place because of obstruction and an effort on the part of the intestine to overcome this obstruction. I am of the opinion that we cannot classify this case as one of true Hirschsprung's disease. I think it would be better to say that this was a case of dilatation and hypertrophy of the colon secondary to obstruction at the anus. Now, you might have obstruction in any part of the body, any part of the bowel, and you expect hypertrophy and dilatation, and these cases are simply explained by the fact that the intestine tries to overcome this obstruction by increased work, increased peristalsis, and there is dilatation and secondary hypertrophy. I don't think this case could be clearly classified as one of true Hirschsprung's disease.

DR. BAILEY (closing): In reply to Dr. Dean's suggestion that the child was probably normal at birth and that its condition was due to obstruction and was not a case of true Hirschsprung's disease I will state

that the child was not normal at birth. Besides the imperforate anus, there were other anomalies, such as transposed colon and miniature uterus and adnexa, and the child had not enjoyed a well day since its birth. Also that the title of my paper is "Congenito-Mechanical Dilatation of the Colon," and not "Hirschsprung's Disease." The comparison I have made of this case with the many hypotheses advanced to explain the pathology found in Hirschsprung's is for the purpose of supporting a belief that the existence of a real idiopathic megacolon is doubtful. The pathology found in this case differs in no way from that of reported so-called idiopathic cases, and in my humble opinion there must exist, at some time, some definite mechanical impediment to the normal outlet to bring about this general hypertrophy of muscle tissue and its subsequent dilatation and atony.

THE EARLY RECOGNITION OF THE
CLINICAL SIGNIFICANCE OF
GASTRIC DISTURBANCE *

A. JACKSON MCNEES, M.D.
CLINTON, MO.

The enormous amount of literature, the unsatisfactory discussion which has been evoked by disturbances of the stomach, and the varied classifications found in many of our text-books have been misleading to the minds of medical men from time immemorial. It is not my aim to ignore the clinical fact that we have a few symptom-complexes of this viscus independent of any pathologic lesions elsewhere. However varied and dogmatic our clinical diagnosis, they often fail to be verified at autopsy and have never been of practical value in our armamentarium of modern pathology. I wish to refrain as much as possible, but in no manner ignore, the teaching of our predecessors, who by their diligent study and close observation outlined the principles of our modern knowledge of physiology and pathology. The relative importance and close physiologic relationship of the stomach, duodenum, liver, gall-bladder and pancreas are being discussed and the light of modern observation is bringing forth their close physiologic relationship.

Embryology teaches us that the stomach, duodenum, liver, gall-bladder and pancreas originated from a small segment of the primitive elementary canal, and that the parenchyma of these organs, as well as stroma, nerve, lymph- and blood-vessels are derived from this structure in the primitive digestive tract, and our anatomy reveals the same blood and nerve supply for these organs that existed when they were a part of the simply primitive tube. Research work in embryology and physiology doubtless will reveal more minutely the continuity and cell structure of the gastro-duodeno-

hepatico-pancreatico-physiologic system, as outlined by MacCarty,¹ in its relation to gastric disturbance.

Those familiar with the experimental studies of Starling, Parlow, Cannon and others on the physiology of the digestive system, appreciate the close connection of the stomach with the sympathetic ganglia, central nervous and cerebrospinal system. Digestion is largely controlled by those primitive chemical agents, which Starling calls harmones. Just what part the complex blending of the sympathetic nervous system with the ductless glands, as exemplified in the adrenals, thyroids, parathyroids, etc. (known as the internal secretions), plays in this connection, remains a subject of much controversy.

The epigastrium, with its numerous sympathetic nerve ganglia, offers a focus towards which the diseases of all possible organs throw their rays, an example of which is the severe gastric disturbance at the outset of so many acute infections.

Diagnostic pitfalls are a frequent annoyance to the general practitioner in relation to gastric disturbance, and one needs to practice medicine but a few years to realize the frequent occurrence of stomach disorders which comprise a large percentage of his practice. Most generally the diagnosis is made on the subjective symptoms and is labeled gastritis, acid gastritis, subacid gastritis, gastrodynia, neuralgia of the stomach, nervous dyspepsia, indigestion, hyperchlorhydria, etc., many of which are dangerous as implied, as they conceal the facts, since the presence of an excess of HCl is not constant, and from a clinical standpoint they should be dropped from medical nomenclature, as chemical analysis of stomach contents has failed absolutely to construct a true pathology.

In consequence of investigations made by Runbow, Hornberg, Bickel and others, the opinion has been almost generally accepted that pure gastric juice always has the same rather high percentage of HCl, even under pathologic conditions. However, I shall not enter into the theoretical discussion of gastric analysis, the value of which is too well known to be reiterated in this connection, and I feel it has no place in this paper. Mayo,² Wathen³ and other recent writers say that in 90 per cent. of cases of chronic dyspepsia, there is no pathologic lesion in the stomach; they also say that 30 per cent. of stomach troubles are caused by cardiac and kidney insufficiency, tuberculosis, arteriosclerosis, tabes dorsalis, etc.

Cabot⁴ says that acute gastritis is a rare disease in adults; as a rule, appendicitis or gall-

1. McCarty: *Ann. Surg.*, May, 1910.

2. Mayo, W. J.: *Boston Med. and Surg. Jour.*, April, 1911.

3. Wathen: *Jour. Am. Med. Assn.*, March 8, 1913.

4. Cabot: *Jour. Am. Med. Assn.*, Dec. 28, 1912.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting, held at Joplin, May 12-14, 1914.

stones is the correct diagnosis. Chronic indigestion is usually a mistaken diagnosis, the actual condition being peptic ulcer, pulmonary tuberculosis, constipation or cancer of the colon. Our diagnosis of carcinoma of the stomach and intestines is rarely made at a time sufficiently early for correction; it is made late in the process, since we do not associate symptoms other than emaciation, vomiting, cachexia and well-defined tumor, pain, etc. It is certainly very difficult and in many cases almost impossible to recognize incipient carcinoma of the stomach, because a relatively large percentage of these patients fail to consult a physician until gastric symptoms are well advanced, and then it is too often considered as a functional disorder, when in reality there is a well-defined organic lesion. In a series of 1,000 cases observed by W. J. Mayo,⁵ the average duration in which gastric disturbance preceded cancer was more than two years, and so far as he knows, cancer has never developed without a previous lesion. Keen and Bloodgood state that no case of carcinoma of the skin has been reported that did not begin from some pre-existing irritation as scar tissue, ulcer wart, mole tumor, Roentgen-ray burn, etc.

We are well aware of the fact that chronic ulcer of the stomach in a certain proportion of cases leads to the development of malignant disease; cancer of the stomach would seem to begin in connection with chronic ulcer, in something over 60 per cent. of cases as observed by W. J. Mayo,⁶ as a result of the examination of a large number of specimens removed during the operation of partial gastrectomy, a statement which coincides with that of Keen and Bloodgood and other observers on both clinical and pathologic grounds.

There is no known positive method of diagnosis—complete gastric analysis, ingestion of bismuth, Roentgen ray, or any other method—so reliable as exploration, which should be insisted on in all chronic cases, especially if repeated examinations of stomach contents show gradual diminution of HCl, and indeed demanded in all those cases that exhibit food remnants ten to twelve hours after ingestion.

My observations confirm Cabot's statement that worry, anxiety, errors in diet, and such causes are not apt to take effect for the first time in a patient past 40 years of age, and should always be looked on with grave suspicion. The sooner we appreciate the fact that cancer of the stomach is the most frequent and most hopeless form of cancer in the human body, the sooner we will reduce the mortality by advising early operation in the precancerous stage, which affords the patient the only chance

of cure. In duodenal ulcer, a condition responsible for a relatively large percentage of our cases of hyperchlorhydria, Moynihan⁷ has shown gastric analysis to be of little value, as the following figures would indicate. The relationship of hyperchlorhydria to duodenal ulcer, in all the phases in which we meet it on the operating table, from early active ulceration to the final cicatricial stenosis, is roughly that in about 40 per cent. of the cases, free HCl is in excess. In 40 per cent. it is approximately normal, and in 20 per cent. it is well below the normal, but clinically all cases of recurring severe hyperchlorhydria are in reality duodenal ulcer.

It is thought that there might be a geographical factor influencing the amount of HCl, as the following authors indicated at the discussion on the treatment of gastric ulcer, at the German Congress for Internal Medicine, held in Weisbaden, in 1909. Len Hartz of Hamburg, Von Müller of Munich and Von Krehl of Heidelberg laid stress on the differences in the results of analyses of gastric juice in patients suffering from gastric ulcer in different localities. In Munich hyperacidity is exceptional; in at least 20 per cent. of the cases there is hyperchlorhydria. In North Germany, on the other hand, hyperchlorhydria is almost constantly present in gastric ulcer, as well as in France, and especially in Paris. Patterson⁸ states that he has operated on nearly fifty cases of hyperchlorhydria, and in every one there was an organic lesion, either of the stomach, duodenum, gall-bladder or appendix.

The close connection of the stomach, duodenum, liver, gall-bladder, pancreas and appendix is further emphasized in the following figures of Moynihan.⁹ In nine out of ten of his cases of ulcer of the stomach and duodenum that go to operation, the appendix is removed, and in 80 per cent. of those removed, appendicular disease has been revealed. Figures that coincide with those of other observers, which suggest that ulcers in the stomach, and duodenum are of an infectious nature, probably originated in the appendix. I have previously shown in this paper that chemical analysis of the stomach-contents is of little value, especially in duodenal ulcer, and that the diagnosis can be made almost exclusively on the anamnesis. Moynihan was able to do this in 100 consecutive cases, and confirm them on the operating table. However, the examination of the feces for occult blood should not be overlooked in these cases, as the findings are of much diagnostic value, according to such men as Moore,¹⁰

7. Moynihan, T.: *Duodenal Ulcer*, 2d edition.

8. Patterson, H. J.: *Tr. Roy. Soc. Med.*, 1910, iii, 108.

9. Moynihan: *Lancet*, Aug. 17, 1912.

10. Moore, Craven: *Quoted from Moynihan's Duodenal Ulcer*, 2d edition.

5. Mayo, W. J.: *Jour. Am. Med. Assn.*, Aug. 23, 1913.

6. Mayo, W. J.: *Quoted from Moynihan's Duodenal Ulcer*, 2d edition.

who has found occult blood in 100 per cent. of his personal cases. Probably this high percentage was obtained through daily examinations of the stools.

It has been our custom to follow the teachings of some text-books which have been inadequate in their knowledge of pathology and a true physiologic process of the digestive tract.

Kinks in the lower ileum resulting from ptosis of the cecum, or membranous colitis, a condition which may restrict the normal movements of the cecum and colon, and give rise to symptoms in the gastro-intestinal tract, are often diagnosed as chronic appendicitis, chronic colitis, intestinal indigestion, biliousness and inflammation of the stomach and bowels.

Inflammatory conditions of the stomach are exceedingly rare when we analyze the broad subject of inflammation with its succession of changes which take place in living tissue, characterized by pain, fever, swelling, redness and organization of tissue by phagocytosis; congenital or acquired abnormalities in the abdominal viscera are responsible for a relatively large percentage of cases of gastro-intestinal disturbance, manifested in conditions called gastrop-tosis, enteroptosis, atonic dilatation, etc.

We all appreciate the frequency with which stomach disorders are associated with neurasthenia and other nervous disorders.

Arteriosclerosis has its manifestations in the stomach, and vascular crisis, a term with much logical significance, discussed and outlined by Pal, holds an important place in our conclusions of the analysis of gastro-intestinal disturbance.

In conclusion I wish to emphasize the following points:

1. That in all cases of chronic dyspepsia, we should search for some underlying pathologic condition, by a careful and painstaking general examination.

2. Dyspepsia is more of a surgical disease than medical, and a relatively large percentage of these chronic dyspeptics can be cured by surgical intervention.

3. That all cases of chronic, persistent, hyperchlorhydria with the characteristic hunger pain coming on two to three hours after meals and relieved by taking food, are duodenal ulcer, and that a relatively large percentage of these cases are temporarily relieved by the proper dietetic and medicinal treatment, but ultimately they are compelled to seek the surgeon if permanent relief is obtained.

4. That hyperchlorhydria, hyperacidity, acid dyspepsia, etc., should always be considered manifestations of an organic lesion until proved otherwise.

5. That chemical analysis of the stomach-contents, Roentgen-ray picture and examination of feces for occult blood are valuable aids, but

a thorough analysis of the history, constructed on all the facts entering into the case, is our most valuable asset in arriving at a correct diagnosis in all cases of gastric disturbances, and especially in duodenal ulcer.

6. After a thorough chemical analysis of the stomach-contents and a rigid dietetic regimen and with no appreciable benefits, exploratory laparotomy should be recommended for diagnostic purposes as the result of which dangerous complications in appendix, gall-bladder, duodenum and stomach would be reduced to a minimum.

CERVICAL RIBS*

CARYL POTTER, A.B., M.D.
ST. JOSEPH, MO.

C. A., aged 17, consulted me Jan. 7, 1914, complaining of sloughing sores on the tip of his left thumb and about the base and side of the nail of the left ring finger; also of numbness, coldness and weakness in the hand and forearm and upper arm, frequently accompanied by cyanosis and tingling sensations in the hand, forearm and fingers.

Personal History.—Previous to Oct. 1, 1913, he had been doing active athletic work. About one and one-half weeks after a strenuous game of basket ball, he noticed paroxysms of numbness in the hand, which during the attack would become very cold. A few days later it was apparent that the left hand was becoming weaker.

These attacks became progressively worse and more frequent until November 15, when the skin of the ring finger commenced to exfoliate about the base of the nail, gradually extending toward the finger tip and leaving an ulcerated surface behind. The skin beyond the ulceration became dry and hard.

About December 15, the skin of the thumb-tip commenced to scale. Ulceration appeared a few days later. There was intense, dull aching pain in all of the fingers—"whiteness, numbness, aching." He said that the hand felt as if it had been frost-bitten. Sitting with the hand elevated gave him most comfort. Lying down intensified the pain.

General examination revealed a well-nourished boy, apparently in perfect health. The heart and lungs were negative.

On local examination, extending for about 2 cm. above the junction of the inner and middle thirds of the left clavicle, there was a pulsating tumor which did not have the expansile pulsation of an aneurysm. Passing almost into the tumor and slightly below it posteriorly there was a firm, hard prominence. This could be traced a short distance posteriorly until it disappeared in the soft parts of the neck. The entire left anterior triangle seemed much fuller than the right.

The left arm from the shoulder to the wrist showed moderate wasting, the grip was weak and the entire hand appeared cyanotic. The farther the distance from the shoulder-joint the colder the arm seemed. The radial pulse, pulse in the antecubital fossa and brachial pulse were absent. On the tip of the thumb and around the base and ulnar side of the nail of the ring finger there were sloughing and ulcerated areas, the one on the thumb measuring about $\frac{1}{4}$ cm.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting, held at Joplin, May 12-14, 1914.

in diameter and the one on the ring finger 1 cm. in the longest diameter. Surrounding these there were small areas of moist gangrene. The sensation in the entire hand was very much impaired.

A diagnosis of cervical rib was made. Roentgen-ray examination and excision of the rib (described below) confirmed the diagnosis.

History.—The above case presents a subject which has been more often of anatomical than of surgical interest. The occasional occurrence of symptoms, many times exceedingly severe, and making surgical interference necessary, demands that the subject be taken from the realm of anatomical consideration and given a rank of more than passing interest surgically. Some of the more modern surgical works omit a description of the condition altogether. Many finish the subject with a few words.

Cervical ribs, treated medically, were described by Hodgson (1815), Cooper (1818), Adams (1839) and Poland (1869). Pillings, in 1894, collected 139 cases, which were of more interest to anatomists because only three had given symptoms and were treated surgically. Coote (1861) resected the first cervical rib for symptoms, and his case was unusual in that an exostosis from the rib had given rise to symptoms from pressure on the plexus and brachial artery. Planet, in 1890, described the second resection of cervical rib, an operation performed by Perier, which cured symptoms from pressure on the plexus. In 1892 Fischer cured symptoms of cervical rib pressure by rib resection. He had described in another paper the clinical importance of the condition. This paper seemed to awaken the surgical profession to the realization of the clinical importance of the condition, and, in the last quarter century, descriptions in clinical reports have been more frequent, many men speaking of the surgical cases as "surgical rib."

Keen has collected 43 operated cases of his own and others, which includes 32 females and 11 males. The above reported case adds another male. Other scattered cases appear in the literature.

Anatomy.—Supernumerary ribs most often come from the lumbar vertebrae, where they never cause symptoms. Cervical ribs are usually attached to the seventh cervical vertebra and many times are bilateral, but of unequal length on the two sides. Two cases have been reported in which there was an additional sixth rib present and one case in which a sixth and no seventh was present. At the body they are usually attached to the transverse process and body with an articulation, but may be completely ankylosed to the spine. The scaleni muscles may be attached to the rib, and were in the above case.

As the best classification Kammerer selects Blanchard's, which is as follows:

1. Complete supernumerary rib attached to the sternum— one autopsy only.

2. In which the cartilage of the supernumerary rib is united with the cartilaginous end of the first dorsal rib—rare but commoner than the first variety.

3. In which the two extremities of the rib are developed as bony structures, but the intermediate portion is represented by a band of fibrous tissue.

4. In which the two extremities of the rib are developed, but not united by a fibrous band. The anterior extremity may be of bone or cartilage and may be attached to the sternum or to the cartilage of the first rib. The posterior extremity is always attached to the seventh cervical vertebra, and its anterior end is either free or united to the first rib by an articulation or by bony tissue.



Fig. 1.—Rib removed at operation; a, groove over sternal end of rib showing course of subclavian artery; b, attenuated vertebral end of rib.

5. In which the supernumerary rib is represented only by a segment attached to the vertebra, and there is no indication of an anterior extremity.

To these five groups I wish to add a sixth which the accompanying illustration shows to be present in the case herein reported (Fig. 1).

6. In which the posterior extremity is attenuated and attached to the seventh cervical vertebra by a small filament of bone which becomes larger as the anterior end approaches the first rib, where it is attached to the first rib close to its junction with the sternum. At the beginning of its anterior fourth the rib seems to broaden and flatten transversely, forming a groove in which the subclavian artery rested in passing over the rib (Fig. 1a). Opposite this groove there was a pouch-like dilatation of the wall of

the artery, a beginning aneurysm. Posterior to the artery the plexus was lifted up and placed on a stretch by the rib, but not compressed to the extent of the artery, this probably accounting for the fact that the symptoms due to mechanical interference to the circulation were more prominent than those due to nerve pressure. The scaleni muscles were attached to the rib posterior to its passage underneath the plexus.

Symptoms.—The symptoms are those of circulatory interference and nerve compression, which may occur singly or in combination, depending on the anatomic group in which the rib lies and whether the arching of the rib, as it passes underneath the plexus and artery, is more prominent over the artery or plexus. In the above case the symptoms were extremely severe when the patient was in the supine position, but were relieved when he was sitting up with the arm supported at the elbow.

The following explanation for this seems plausible. While lying on the back the chest,



Fig. 2.—a, showing healed ring finger; b, thumb which also showed an area of gangrene.

which is a fixed, unelastic wall, is projected forward from pressure behind, allowing the extra rib to ride slightly upward and forward, thus exerting additional pressure on the structure passing over it. In the sitting position the whole thorax tends to descend slightly, the neck is elongated and some of the bony pressure from the rib is relieved.

The symptoms in the case reported were of combined interference with circulation and nerve function, the nervous symptoms being of less severity. On the circulatory side there were cyanosis, lowered temperature, loss of pulse in the arteries beyond the obstruction and subsequent gangrene of the finger-tips (Fig. 2). Of the nervous symptoms there were loss of power, weakness, atrophy of the arm, tingling sensations, formication and numbness in the affected part. These symptoms occurred singly or in groups.

Locally, over the site of compression there may be a pulsating tumor or a slightly or more advanced aneurysm or the compressed artery may be palpated when pushed forward. Stony resistance may be and usually is palpated behind. The neck in my case seemed much fuller.

Injury or exertion usually precedes the onset of symptoms.

Diagnosis.—The differentiation must be made between neuritis, neuralgia, Raynaud's disease, progressive muscular atrophy, gangrene from any of the causes of gangrene, thromboses of the axillary or brachial arteries, tumor of the supraclavicular space, exostosis of the clavicle or first rib, local aneurysm and gumma.

The greatest difficulty will probably lie between a diagnosis of cervical rib, osteosarcoma and exostoses. Brewer, before the New York Surgical Society, reported a case which entered the city hospital with a diagnosis of rheumatism of the left arm. A tumor was found above the clavicle which was diagnosed osteosarcoma. An extensive operation was undertaken in which a large incision was made, the clavicle resected and then a supernumerary rib revealed. During the resection the pleura was injured with no severe subsequent symptoms except a slight pleuritis. The Roentgen ray offers the best means of confirming a diagnosis in atypical cases and in the reported case showed a small rib commencing on the right side in addition to the one on the left.

Treatment.—Very few descriptions of the operation are given in any of the accounts. The simplicity or difficulty of the procedure must vary according to the location and course of the anterior extremity. An incision, 6 cm. in length (Fig. 3), was made downward along the posterior border of the sternomastoid muscle to the clavicle and was extended slightly outward along the upper clavicular margin. Prolonging the incision backward along the clavicle undoubtedly gives the best exposure. After dividing the superficial fascia the posterior border of the sternomastoid, brachial plexus and artery were exposed by sharp and blunt dissection. Care should be taken to expose all landmarks thoroughly before attempting to dislocate the rib. Palpation of the covered rib through the soft tissues gives the best lead to its location. In the above case the rib passed forward from the soft tissues of the neck, first beneath the brachial plexus, then extending forward beneath the subclavian artery, angulating sharply just beneath the artery and practically obliterating the lumen. Opposite this angulation there was a beginning aneurysmal pouch developing.

The plexus was separated from the rib posteriorly by blunt dissection, the plexus being

retracted forward with a Blake-McBurney appendix retractor. After posterior separation of the rib the plexus was retracted posteriorly, the artery anteriorly, and the rib separated from both by a Young blunt dissector. The anterior extremity offered the greatest difficulty on account of its deep attachment to the first rib and proximity to the pleura which was separated by means of a sponge forceps holding a small sponge and used as a blunt dissector. The rib was removed in four pieces to a point about 4 cm. posterior to the plexus, bone-cutting forceps having best been used to divide it. The superficial fascia and skin were closed with continuous sutures, a small tube being inserted in the lower angle of the incision.



Fig. 3.—x shows healed scar of incision.

Course and Prognosis.—The tube was removed on the third day. The wound healed by primary union. The entire hand and arm were kept wrapped in cotton for five days. At the end of the third day pain had left the arm. At the end of eight days the patient commenced to notice that the arm was warmer. The areas of gangrene beyond the ulcerations had disappeared and the ulcers had commenced to show granulating areas. The thumb had healed by the end of the second week. The ulcer on the ring finger was reduced to one-half the size it had been before operation. This was his condition on discharge at the end of the second week. To the touch and to the patient the hand seemed warmer than before operation. The symptoms from nerve-pressure had almost ceased.

As to prognosis, the removal of the offending rib cures the symptoms; the sooner the removal after the onset of symptoms the earlier the complete recovery. Often thromboses have formed in the main branches of the artery and completely shut off the radial pulse which may remain absent for all time, but may return at the end of several weeks or months. The anastomotic circulation, however, takes care of the blood-supply to the arm, the symptoms of circulatory insufficiency disappearing as soon as the circulation is reestablished. In the case herein reported the arm circulation was almost reestablished at the end of two months and practically complete at the end of three months. He was last seen on April 11, 1914. No radial pulse could be palpated, but the circulation of the hand seemed normal, except for a slight lowering of temperature in the thumb and ring fingers, the sites of previous ulceration and gangrene. The healed finger is shown in Figure 2, the area of former ulceration and gangrene being easily noticeable. The arm is gaining strength rapidly and symptoms have practically disappeared.

DISCUSSION

DR. W. H. LANYON, Joplin: I did not know what a Sprengel's shoulder or a cervical rib was until last year. The fact should be emphasized that it is necessary to go back and find the cause of the trophic lesions present in these cases. The paper reminds me of a case that Nicholas Senn exhibited at a clinic in Chicago fifteen years ago, where after a fracture of the clavicle there was pressure on the brachial plexus by a piece of bone which had become united at an angle with the clavicle causing paralysis of the arm; he making the diagnosis before operating and relieving the condition. It was a case similar in its pathological results to that of the writer, but of course not due to the same cause. It emphasizes the fact that we should seek the cause behind the trophic change.

In reading Tubby's new work on deformities I first became aware that there were such conditions. General text-books on surgery seldom mention them.

REPORT OF A CASE OF RENAL CALCULUS*

GREENE D. McCALL, M.D.
FULTON, MO.

I will not attempt to go into detail on this subject or to elicit any new idea, for after hearing experienced surgeons, seeing them handle these cases and operating on them, I feel that they have covered the ground so thoroughly that it would be impossible for me to add anything, and I will therefore confine my ideas to my limited experience in the country field of practice where opportunities for work-

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting, held at Joplin, May 12-14, 1914.

ing out fine details are very limited. The successful diagnosis and treatment of renal calculi is comparatively modern, and depended on the advent of the Roentgen ray largely for the practical elimination of difficulties in diagnosis. We read and hear a great deal about treatments intended to dissolve these stones and prevent their recurrence. I think it generally conceded that good results are seldom obtained by such procedures; but owing to the fact that they possibly have a tendency to check or prevent further progress in the formation of stones and do not interfere with the patient's welfare, the use of distilled water, Buffalo lithia and other waters are recommended by many.

For large or imbedded stones, operation is the only course to pursue, and for smaller ones that are likely to lodge somewhere in the tract it is safest. We see that Morris operated successfully on these cases as far back as 1880, and the location of his incision and means of access to the kidney are used to this day and known as the "operation of choice." The following is the report of a case coming under my observation, which I respectfully submit for your consideration.

R. G., aged 32; occupation, butcher and meat-cutter; married; height, 5 feet 6 inches; weight, 155; appearance, unhealthy and nervous. Had all the ordinary diseases of childhood; no serious sickness except typhoid fever at the age of 14, and severe attack of gonorrhea at 18, from which he says he did not recover for over a year.

Case came under my observation Nov. 21, 1913, with the following history: Pain in left side of back near second lumbar vertebra, through hypogastrium, forward and downward to a point midway between the umbilicus and anterior spinous process of the ilium.

This pain first appeared about three years ago but was mild in character and would soon pass away, and for two years he did practically nothing for it, but continued to work at his trade, lifting quarters of beef and doing all of the hard work incident to a butcher and meat-cutter's business. He gave up his business about November 20 because the pain was getting much more severe and the intervals between attacks were of much shorter duration. He had always thought that he had some form of indigestion and resorted to the usual method adopted by so many, of taking almost anything that was recommended by people with whom he came in contact. Some of them seemed to help him for a while. He drifted into the hands of an osteopath and was treated for the proverbial displaced vertebra and he thought at times that he was improving. But after several weeks' treatment he found he was no better. Being a very strong man and capable of standing a great deal of punishment, he had never thought his condition serious until he presented himself to me for investigation.

The pain would come on him gradually in most instances, and within a few hours would pass away—"wear off" as he called it. This was in the first stages of the trouble. But the attacks grew more severe as time passed and more frequent in their occurrence, especially if he did heavy lifting, until he was hardly free from pain at all. When a severe pain came on he would get no relief until after he had lain down, relaxed, and had a good sweating out; to induce this

he usually had his wife rub him, give him hot drinks, etc. The pain at times would cease rather suddenly and at other times more gradually. After each attack he would pass a greater quantity of urine than usual. About the time he first noticed this pain in his back and side he weighed 195 pounds. He now weighs 155 pounds.

He could not notice that any one thing he ate disagreed with him any more than another, and the amount of food he ate seemed to have no effect on the pain one way or another. He related that several years before, when a boy, he had swallowed an empty cartridge hull and that it had never passed to his knowledge, and he thought that this was the main cause of his trouble. He had passed no blood in his urine, no pus that he knew of, and had never noticed any decrease in the usual amount of urine. There was no tenderness on pressure over the kidney, not even when I put my fist over the region and hit it hard with my other first. This stumped me, for it rather contradicted my opinion that there was a stone in the pelvis of that kidney. However, I determined to run the case down with that idea in view. Examination of the urine showed: fairly clear, straw color, possibly a little dark, acid reaction, specific gravity 1.022; albumin and sugar tests negative; microscope revealed red corpuscles, pus, calcium oxalate (envelope crystals), and cystin (six sided crystals); blood pressure 140. These findings served to strengthen my original idea as to a stone. I put him on distilled and Buffalo lithia water; no other medical treatment. My next step was to take a skiagraph, and again I met with a perplexing proposition, for in front and on a line with the upper portion of the fourth lumbar vertebra there was a distinct shadow just the size and almost the exact shape of a cartridge hull; also shadow in region of left kidney.

When the patient saw this he was satisfied that his old theory regarding the cartridge hull was correct and he wanted to go to the hospital at once and have it removed. But I could not believe even were it possible that this foreign body had become imbedded in the intestinal tract that it could account for the existing symptoms without other symptoms which intestinal obstruction would surely produce, although I was aware of the fact that pain in the abdomen does not always confine itself to the region wherein lies the cause. For instance, I have seen several cases of appendicitis, pure and simple, and the pain was located on the opposite side or much higher in the cavity than the appendix. I put the patient on very light liquid diet for a day or so and gave him two ounces of castor-oil to get the canal thoroughly free from gas and material that would affect the picture; took another picture which revealed the same stone shadow but no sign of the cartridge hull. I took three more pictures at intervals of a few days with the same result, each with a shadow just to the left of the second lumbar vertebra. I was now pretty well satisfied that there was a stone in the pelvis of the kidney, and from the way the pain would come and go after he would lie down, and from the fact that he would pass more urine than usual, I was led to believe that it was located in the pelvis of the kidney and could not pass into the ureter but stopped at its mouth and formed a ball valve, as it were. As the urine dammed back into the kidney causing pressure it would thus give rise to the pain, and when he would lie down and relax the stone would drop back sufficiently to allow the urine to flow by, thus relieving the pressure and causing the pain to cease and the urine to flow to the bladder normally. I thought it probable that the stone formed in one of the calyces or corner of the pelvis and by the time it had become dislodged was too large to pass through the ureter and hence lodged at the constricted part which forms

the mouth of the ureter. With this idea in view, I advised him to elevate his hips, lower his shoulders and relax all he could as soon as he felt the pain starting, and explained my theory to him.

He reported that he got relief much quicker in this than in any other manner. I was sure I was right in my diagnosis, but having had little experience in making skiagraphs and knowing the probability of making a grave error by operating before I had exhausted every effort to prove my diagnosis correct, I took the patient to Chicago and had a bismuth-impregnated catheter passed through the ureter and a picture taken while it was there. This verified my diagnosis. Stone shadow was very plain as was the catheter which could be seen against the stone where it stopped. Operation on this case was delayed on account of sickness in the patient's family, until January 10, six weeks after the diagnosis.

Incision was made beginning just below the twelfth rib at the edge of the erector spinae and quadratus lumborum muscles, following a line toward the anterior spinous process of the ilium. Patient was of such short build and so muscular that it was with much difficulty I introduced my hand. I found the kidney badly disorganized, forced upward so that the lower pole was extending only a very little below the twelfth rib and the upper pole was up to the tenth rib. The lower pole was also forced forward. The middle portion of the kidney was flabby and seemed only to consist of connective tissue and capsule; each extremity was soft and felt as though it were beginning to break down. Adhesions had formed, and owing to that and the small space in which I had to work, it was impossible to deliver the kidney, which, however, proved unnecessary, for after careful inspection with my fingers I was certain that no stone was in the kidney, neither was there one in the pelvis, but remembering that the picture gave a shadow just to the left of the second lumbar vertebra, I extended my examination on down the ureter and found the stone imbedded in the wall of the ureter about 2 inches below the pelvis. It looked at this point, and under the circumstances, as if it would be best to remove this kidney, for it could hardly be expected to recover sufficiently to functionate; but not being positive that the other kidney was perfectly free, and as it might become involved in a similar process—which is frequently the case—I decided that two impaired kidneys would leave him in better condition than to depend on what probably would result in trying to live with only one, and that impaired.

I opened the outer wall of the ureter, which had become very much thickened, and attempted to extract the stone without disturbing the inner wall, if possible. The stone came out in two pieces—a condition that could be plainly seen in the picture.

The original stone was a little over $\frac{1}{2}$ inch long and $\frac{1}{4}$ inch in breadth. Finding no other stone, I took two stitches in the outer wall of the ureter with small catgut, placed a cigarette drain beside these stitches and closed up the fatty capsule and wound close around the drain. (I know this is condemned, but was tempted to take the stitches because the wall was so thick and with hopes of the inner wall not being injured. I did so, but was disappointed.) Patient voided six ounces of urine eight hours after the operation containing shreds of blood. This kept up at intervals of eight or ten hours for two days, increasing in quantity. Up to this time the drain in the back kept nearly dry, but at the end of the second day it drained very profusely and the blood disappeared in the urine that was voided. On the fourth day a pain came in the right side, very similar to the one that had been coming on the left. Thinking it was gas pain I treated it as such and he was relieved, but every day or so it would return, not so severe.

I removed the patient from the hospital on the eleventh day. He appeared to be improving rapidly until the fifteenth day, when the pain became very severe and could hardly be controlled even with opiates.

He had severe chills, rapidly declined, and became almost prostrated. Blood-pressure rose to 160 and 175. Urine from bladder ceased entirely. Used catheter and extracted a little pus and sand, some pieces of stone as large as a grain of wheat. Irrigated the bladder with warm boracic acid and salt solutions. I decided that the obstruction was not a stone of any size for none were visible in that kidney in any of the skiagraphs, but thought it more likely an impaction of sand and small particles, so I sent to St. Louis, procured a cystoscope and with the assistance of my colleagues passed a catheter with stilet into the ureter, and the patient voided 3 ounces of urine in about three hours and continued passing nearly a pint a day for several days. Pain was much less severe, but did not cease entirely. For several days thereafter, the amount of urine voided was irregular—some days none at all, then from half a pint to a pint—but during this time the left kidney was draining very freely, saturating the dressings and bed twice daily. About the seventh day after using the cystoscope he had a very severe chill and was thoroughly prostrated, blood-pressure 180, voided no urine for thirty-six hours, except what was through the back from the kidney that had been operated on.

In the meantime sand and small particles had been coming through the catheter, as much as a heaping teaspoonful in all, after irrigation with warm normal salt solution. Patient began to improve from this on, and urine from the right kidney increased in quantity; about three weeks later he passed a pasty stone about the size of a pea. Pain all disappeared and about two and a half months after the operation urine from the left kidney was passing through the normal channel and the drainage tube was removed. Patient is gaining weight rapidly, being kept on distilled water, cautioned to restrict his diet to what readily agrees with him and not to eat more than he can easily digest. Present weight about 165 pounds; blood-pressure 139.

SOME CHEMICAL AND GERMICIDAL PROPERTIES OF ANTISEPTICS AND DISINFECTANTS*

ROY CROSS, M.D.
KANSAS CITY, MO.

In considering the chemical properties of antiseptics and disinfectants, we have a fairly clear idea, in the terms of present-day chemistry, of the antiseptic or disinfectant in relation to its own make up, but we do not understand thoroughly the relation of the germicide to the proteids of the bacterium. We can hardly hope for a much better understanding of the mechanism of germicidal action until we know more about the proteids or albumins constituting the bacteria.

Regarding the germicides themselves, it is to be observed almost without exception that they are very active chemicals capable of easily undergoing chemical change, though nearly

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all substances of simple chemical structure in high concentration probably exert some antiseptic action. According to their characteristic properties, antiseptics and disinfectants may be grouped as follows:

1. *Oxidizing Agents*, of which potassium permanganate is an example.

2. *Reducing Agents*, of which formaldehyd is an example.

3. *Aromatic and Coal Tar Compounds*, of which carbolic acid, or phenol, is an example.

4. *Acids and Alkalies*, of which hydrochloric acid is an example.

5. *Heavy Metal Salts*, of which bichlorid of mercury is an example.

6. *Physical Agents*, of which sunlight is an example.

1. *Under Oxidizing Agents* may be found such substances as hydrogen peroxid (H_2O_2), potassium permanganate ($KMnO_4$), chlorin (Cl_2), bromin (Br_2), iodin (I_2), calcium hypochlorite and sodium hypochlorite.

The method of operation of these germicides is that of oxidizing or burning up the organic matter in the bacterium. The oxidizing action is not selective on the bacterial matter alone but acts as well and sometimes more easily on other organic matter that may be present. Preliminary to the oxidation, a slight precipitation in some cases takes place. This is so slight, however, as a rule, that it does not seriously interfere with the penetration of the oxidizing agent. On account of the powerful oxidizing ability of this class of germicides, they are not used medicinally except for local application. One of the most valuable for this purpose is peroxid of hydrogen, which adds to its germicidal action the mechanical action caused by the splitting off of oxygen in contact with certain ferments to be found in the blood and tissues. Peroxid of hydrogen, however, is not so powerful a germicide or antiseptic as potassium permanganate. In the absence of organic matter, potassium permanganate has about fifteen times the germicidal value of carbolic acid.¹

Besides its medicinal use, on account of its comparative cheapness, it is used in Europe for street cleansing, though not used in this country to any great extent for that purpose.

The most powerful germicide of all in this group and probably the most powerful germicide which is available is chlorin. On account of its poisonous nature as molecular or free chlorine it is practically incapable of being used for medicinal purposes, but in its sanitary application it is the most valuable germicide we have. In the treatment of water

the introduction of five pounds of chlorin in terms of active chlorin or fifteen pounds of hypochlorite of calcium to one million pounds of water fairly free from organic matter effectively destroys the typhoid and colon bacilli that may be present. Most commonly the water is treated with hypochlorite of calcium but when a large amount is necessary to sterilize the water on account of turbidity, an undesirable taste is produced. This may be obviated now by the use of liquid chlorine instead of the hypochlorite. The value of chlorin for sterilizing water is shown by the low typhoid death-rates of cities using this kind of sterilization.² The effectiveness of chlorin for general disinfecting purposes is very good, and it may be very conveniently applied from cylinders of liquid chlorin. The great disadvantage, however, is its oxidizing and corrosive action on metal work and its bleaching action on fabrics and printing.

Not far behind chlorin in effectiveness and similar in action is iodin, which is of great value as a local germicide, particularly on account of its power of penetration and also on account of its ability to be absorbed by fatty bacterial envelopes. It is particularly to be observed that with this group of germicides the product of the oxidizing action is harmless. For instance, chlorin is converted to chlorid, such as sodium chlorid, iodin to iodid, hydrogen peroxid to water and oxygen.

2. *Reducing Agents* include the sulphites (SO_3 —), formaldehyd (CH_2O), thiosulphates (S_2O_3 —), hexamethylenetetramin ($[CH_2]_6N_4$), arsenic (As_2O_3) and the like. Reducing agents are exactly the reverse of oxidizing agents in their characteristics. The mechanism of the germicidal action of reducing agents is entirely different from that of oxidizing agents. There is no tendency to burn up the tissue but there is a decided tendency to form addition products, probably with the proteid molecule. This explanation of the mechanism would suggest that there may be specific action in germicidal properties of reducing agents. In addition to this mode of action, the reducing agents on account of their ability to consume oxygen, have an antiseptic action on aerobic bacteria, illustrating the probability of special action of the group. For room disinfecting purposes, the reducing germicides are most valuable on account of their passivity toward metal work and their lack of corrosive action.

The most powerful and valuable germicide in this group is formaldehyd, which has in terms of the gas about fifteen times the germicidal power of carbolic acid and in terms of the 40 per cent. solution, six times the power

1. Post & Nicoll, J. A. M. A., 55, 1635.

2. Johnson, Engineering News, 70, 473.

of carbolic acid. In acting on bacteria, formaldehyd first possibly coagulates the proteid and secondly reacts with the proteid molecule. It has considerable penetrating power, however, on account of less likelihood of reacting chemically with the average organic matter than is the case with chlorin. Formaldehyd, as such, can not be so extensively used for medicinal purposes on account of its disturbing action on the human organism. It has been introduced into the stomach most largely by means of milk, for which it is an absolute antiseptic in extremely small quantities. When once introduced into the stomach it is fairly quickly absorbed and when the blood-stream is reached is almost immediately oxidized to formates.³

For internal medication formaldehyd is introduced into remote parts of the body by means of hexamethylenetetramin (urotropin) which is formed by the action of ammonia on formaldehyd. This combination is not very strong however, and in accordance with the 'mass law,' the removal of ammonia or of formaldehyd which is in equilibrium with the hexamethylenetetramin causes the dissociation of the hexamethylenetetramin. The means of increasing the amount of formaldehyd would be to remove the ammonia with acid. Fortunately, this dissociation is not very rapid, being almost negligible in alkaline solution and rather slow in acid solution. This fact means that the drug is capable of passing into the stomach without serious disintegration and into the intestines with practically no disintegration and being very soluble in water, is quickly absorbed into the blood, where it is constantly giving off a small amount of formaldehyd. In the blood-stream, however, the presence of oxyhemoglobin is constantly converting the free formaldehyd into formate.³ In the other body fluids, however, such as the bile, the formaldehyd is not destroyed by the oxidizing effect and considerable antiseptic and even germicidal action is exerted.^{4, 5} The same condition holds in regard to the urine where hexamethylenetetramin is without question and by far the best antiseptic available.^{3, 5, 6} Its activity is practically nil in alkaline condition but is germicidal in acid conditions. As much as 10 per cent. of the drug is decomposed in highly acid condition and about 1 or 2 per cent. in normally acid conditions. For this reason, after administering hexamethylenetetramin or urotropin, it is well to administer an acid salt, such as monosodium hydrogen phosphate (NaH_2PO_4).⁶

3. *The Aromatic* group includes phenol, cresol, salicylic acid, benzoic acid, the sulphocarbolates, resorcin, thymol, guaiacol, eucolyptol, beta-naphthol, methylsalicylate, aromatic oils and salol.

Aromatic and coal tar compounds are in many respects the most interesting and the most valuable of all antiseptics. It was phenol or carbolic acid which was first proposed as an antiseptic by Lister more than forty years ago, and based on phenol, a large number of analogous compounds have come into use. The mechanism of the action of the coal tar antiseptics is more or less in question, but in general the preponderance of evidence is that the bacterium has the ability to absorb the germicide from the water much in the same way that iodine is taken up from a water solution by oils or other immiscible solvents and that the colloidal condition of the proteid is destroyed.^{7, 8, 9} Bacteria killed by coal-tar germicides are capable in many cases of being washed free from germicide.¹⁰ The advantage of the aromatic compounds is that they can be used internally with less toxic effect than the majority of other germicides. The aromatic compounds of simpler structure are more poisonous to higher animals and the more complex compounds are less toxic to higher animals but usually have a greater germicidal value than the simpler compounds. For example, metacresol ($\text{C}_6\text{H}_4\text{CH}_3\text{OH}$) is considerably more germicidal than phenol and is very much less poisonous. As a general thing the carboxyl (COOH) group substituted for hydrogen in the benzene ring lessens the toxic action. This is illustrated in the case of salicylic ($\text{C}_6\text{H}_4\text{OHCOOH}$) and benzoic acids ($\text{C}_6\text{H}_5\text{COOH}$). The sulphon (SO_3) group acts similarly to carboxyl. Sulphocarbolate of sodium is an illustration of this ($\text{C}_6\text{H}_4\text{OHSO}_3\text{-Na}$).

Of this group, the most valuable members are salol ($\text{C}_6\text{H}_4\text{OHCOO C}_6\text{H}_5$) and the salicylates. Salol is particularly valuable on account of its lack of solubility in water, its stability in acid solution and the readiness with which it decomposes in alkaline solution to phenol and salicylate. Phenol, or carbolic acid, is used as the standard for valuation of all germicides.

4. *Acids and Alkalies* include the strong acids such as hydrochloric acid and sulphuric acid and the strong bases such as caustic soda. They act by the disruption or digestion of the proteid molecule and must be present in considerable quantity to be valuable as germicides.

3. Sollman, J. A. M. A., 51, 818.

4. Knick & Pringsheim, Deutsch. Arch. f. klin. Med., 101, 137-149 (C. A. 5, 1623).

5. Crowe, Archiv. intern. de pharm. et de therapie, 18, 315.

6. Jordan, Biochem. J., 5, 274, J. A. M. A., 61, 1406.

7. Bechhold, Z. Chem. Ind. Kolloide, 5, 22-25 (C. A. 4, 486).

8. Herzog & R. Betzel, Z. Physiol. Chem., 74, 221 (C. A. 6, 1018).

9. Cooper, Biochem. J. 7 (C. A. 7, 2401).

10. Kuster & Rothaub, Z. Hyg., 73, 205 (C. A. 7, 1372).

5. *The Heavy Metal* group of germicides includes mercury, silver, lead, copper and bismuth. The meal salts act on bacteria by combining with the proteid to form albuminates or similar compounds in much the same way that silver nitrate reacts on hydrochloric acid to form silver chlorid. At the same time that the metal albuminate is formed, acid is set free though not in all cases in a quantitative ratio.

The most used germicide of this group is mercury. Mercury, such as mercuric chlorid, when acting as a germicide forms a precipitate which is absolutely fixed in the bacterium. In all cases, the bactericidal action of mercuric chlorid is due to the mercuric ion since after its action all the chlorid is set free. In fact, all members of this group owe their activity to the presence of the ions and not to the undissociated salt. The activity of calomel is due to its conversion to bichlorid of mercury. Sodium chlorid or potassium iodid enormously increase the conversion of calomel into soluble mercuric chlorid and thus cause mercury poisoning.¹¹

Silver salts are of the same degree of activity as mercuric salts but have a restriction in that their germicidal action is neutralized by chlorids almost completely, whereas mercuric chlorid is only slightly restricted by chlorids.

6. *The Physical Agents* which exert bactericidal action are heat, sunlight, electrolysis, ultra violet rays and mechanical removal as by soap and water. Sunlight, heat and ultra violet rays in all probability act on bacteria by coagulation of the bacterial proteids. Soap and water act by the mechanical removal of the bacteria since it has been shown that soap in itself has practically no germicidal value.¹² Electrolysis acts by the generation of molecular chlorin or similar oxidizing agent at the anode and caustic soda at the cathode.

In view of the very wide variation in the chemical properties of antiseptics and disinfectants and the consequent variation in the mechanism of their action, it becomes necessary to use great precaution in adopting a method of testing for the efficiency of individual bacterial agents. The first real method which proved of value in recognizing the worth of disinfectants is the Rideal-Walker method, which has been in use for some time in England and Europe. On account of certain defects in this method, it was modified to become known as the Lancet method. Investigation by the Hygienic Laboratory established the liability of considerable error in the Lancet method and it has proposed a method based on

the Lancet method but improved in many respects.¹³

In brief, the test is performed as follows: One-tenth c.c. of twenty-four-hour broth culture of the typhoid bacillus is added to 5 c.c. of the diluted germicide in a sterile test-tube and at a temperature of 20 C. At intervals of 2½, 5, 7½, 10, 12½ and 15 minutes, a loopful (4 mm. loop) of the antiseptic, to which the bacteria were added, is transferred to 10 c.c. of standard broth and incubated at 37 C. for twenty-four hours. If growth takes place that particular dilution in the time exposed is not sufficient to kill the bacteria. If growth does not take place, the dilution kills.

At the same time that the tube with the diluted germicide is tested, a test is made using carbolic acid under exactly the same conditions. The ratio of the killing power of the germicide to that of the carbolic acid is known as the phenol coefficient. This coefficient is arrived at by dividing the highest dilution of the germicide in question which will just kill the typhoid bacteria in 2½ minutes by the highest dilution of carbolic acid. The same calculation is made for the 15-minute period and the average of the two is the "Hygienic Laboratory phenol coefficient." The following table will illustrate how this is accomplished.

RESULTS OF A TEST WITHOUT ORGANIC MATTER
(* means growth; 0 means no growth.)

Sample	Dilu.	Time culture exposed to action of disinfectant for minutes.						Phenol coefficient
		2½	5	7½	10	12½	15	
Phenol	1: 80	0	0	0	0	0	0	80/80+100/100
	1: 90	*	0	0	0	0	0	
	1: 100	*	*	*	0	0	0	
	1: 100	*	*	*	0	0	0	
Creoleum	1: 80	0	0	0	0	0	0	1.00
	1: 90	*	0	0	0	0	0	
	1: 100	*	*	0	0	0	0	
	1: 110	*	*	*	*	*	*	
	1: 120	*	*	*	*	*	*	
	1: 130	*	*	*	*	*	*	

The objections to this method of determining the germicidal coefficient are as follows:

(1) An insufficient number of dilutions are made for any single time period so that the error as may be seen in the above table can easily be 20 per cent. from that cause alone. Some of the time intervals may be sacrificed for additional dilutions.

(2) The test is not a fair comparative test of some germicides because of the presence of excessive organic matter from the broth culture used. The peptone and meat extract in this broth culture would possibly consume some germicides without reacting in any way with

11. W. Ostwald, Principles of Inorganic Chem. (1902), p. 669.

12. Pilod, Seifen sieder Ztg., 39, 1389.

13. Anderson & McClintic, Hygienic Laboratory Bulletin No. 82.

the others. In other words, a method which practically completely excludes organic matter except the bacterium used is desirable.

To obviate this difficulty, a method has been commercially and successfully used, whereby instead of a broth culture of typhoid bacilli, a distilled water emulsion of a twenty-four-hour colony grown on an agar slant and standardized is used.

(3) No provision is made for the proper mixing of the bacterial emulsion with the diluted germicide.

The seeding tubes containing the diluted germicide may be provided with sterile stoppers so that the bacterial emulsion may be uniformly and thoroughly mixed with the germicide.

(4) The test is too complicated for commercial purposes particularly in necessitating the employment of unnecessary time tests of 5, 7½, 10 and 12½ minutes. A complete test on an unknown germicide would require the use of at least 150 tubes and the technic is entirely too difficult under such conditions, and the time required too great.

(5) No advantage is to be gained by using more than one time period for exposure of the bacteria to the germicide inasmuch as any method must be largely arbitrary. Rapidity of germicidal action is not measure of ultimate germicidal action and a long but practical time of exposure should be chosen. Furthermore, the 2½ minute period makes the technic more difficult. A thirty-minute period is about right for easy technic and economy of time.

The method outlined below seeks to overcome the above named objections and makes the technic quite simple and within the reach of more laboratory workers.

PROCEDURE

Thirty tubes 5/8 inch by 5 inches and provided with tight stoppers are sterilized by steam or hot air and placed in a test-tube rack.

The amount of 1 per cent. solution of germicide and of sterile water indicated by the table is run into the tubes from a standardized buret.

The tubes are stoppered, shaken and allowed to stand over night.

Thirty tubes of clear standard broth are prepared and numbered in accordance with table.

A twenty-four-hour growth of *Bacillus typhosus* on a standard plain agar slant is removed to a sterile vial with sterile distilled water, thoroughly shaken and filtered through a sterile filter (or centrifuged) and diluted to standard of 1,000 million per cubic centimeter.

Three-hundredths c.c. of this emulsion is added to each tube of diluted germicide in accordance with time schedule and the tube is

shaken just after "seeding" and just before inoculating the broth tubes.

At the end of thirty minutes a 4 mm. loopful of germicide is removed to 5 c.c. of broth in accordance with time schedule. (Temperature should not vary over 2 C. from 25 C. during test.) The broth tubes are incubated forty-eight hours.

GERMICIDAL VALUE OF GERMICIDE
(Phenol Coefficient)

Date February 5, 1914.
Laboratory number V- 18.
Sample marked Formalin
Test made for
Microorganisms used *Bacillus typhosus*
Number of bacteria .03 c.c. of emulsion of 1000 million per cubic centimeter (emulsion from agar slant). Emulsion standing up after 5 minutes in centrifuge at 1000 R.P.M. or filtered.
Broth used 5 c.c. of plain (plus 1) broth.
Amount of diluted germicide 10 c.c.
Temperature 25 C. (77 F.)
Time of Exposure 30 minutes.
Foreign organic matter None.

Germicide tube	Per cent.	Dilution	1 per cent. solution c.c. per tube.	Buret reading	Water c.c. per tube	Buret reading	Broth growth	Time emulsion is added to diluted germicide Minutes	Time broth inoculated Minutes
1	1.000	1-100	10.00	10.00	0.00	0.00	0	0	30
2	.800	1-125	8.00	18.00	2.00	2.00	0	1	31
3	.667	1-150	6.67	24.67	3.33	5.33	0	2	32
4	.625	1-160	6.25	30.92	3.75	9.08	0	3	33
5	.588	1-170	5.88	36.80	4.12	13.20	0	4	34
6	.555	1-180	5.55	42.35	4.45	17.65	0	5	35
7	.525	1-190	5.25	47.60	4.75	22.40	0	6	36
8	.500	1-200	5.00	5.00	5.00	27.40	0	7	37
9	.400	1-250	4.00	9.00	6.00	33.40	0	8	38
10	.333	1-300	3.33	12.33	6.67	40.07	0	9	39
11	.250	1-400	2.50	14.83	7.50	47.57	0	10	40
12	.200	1-500	2.00	16.83	8.00	55.00	0	11	41
13	.167	1-600	1.67	18.50	8.33	62.33	0	12	42
14	.133	1-750	1.33	19.83	8.67	70.00	*	13	43
15	.100	1-1000	1.00	20.83	9.00	78.00	*	14	44
16	.080	1-1250	0.80	21.63	9.20	86.20	*	15	45
17	.067	1-1500	0.67	22.30	9.33	94.33	*	16	46
18	.050	1-2000	0.50	22.80	9.50	102.83	*	17	47

PHENOL

1	1.000	1-100	10.00	10.00	0.00	0.00	0	18	48
2	.952	1-105	9.52	19.52	.48	.48	0	19	49
3	.908	1-110	9.08	28.60	.92	1.40	0	20	50
4	.782	1-115	8.72	37.32	1.28	2.68	0	21	51
5	.832	1-120	8.32	45.64	1.64	4.36	0	22	52
6	.800	1-125	8.00	8.00	2.00	6.35	*	23	53
7	.770	1-130	7.70	15.70	2.30	8.66	*	24	54
8	.742	1-135	7.42	23.12	2.58	11.24	*	25	55
9	.714	1-140	7.14	30.26	2.85	14.10	*	26	56
10	.690	1-145	6.90	37.16	3.10	17.20	*	27	57
11	.667	1-150	6.67	43.83	3.33	20.53	*	28	58
12	.625	1-160	6.25	50.00	3.75	24.28	*	29	59

Phenol Coefficient Formaline 750/120 equals 6.2.
* Indicates growth.

The lowest dilution of germicide which failed to yield growth divided by the lowest dilution of phenol which failed to yield growth

is the phenol coefficient. In case the coefficient is greater than 2, a repetition of the test may be made for more accurate results with many dilutions in the region the coefficient is now known to be.

A method of standardizing involving the determination of the percentage of bacteria killed by different dilutions of the germicide has been suggested and is worthy of consideration but can hardly be as satisfactory as the Hygienic Laboratory method or of one of its type.^{14, 15}

1013 Grand Avenue.

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SPLENOPEXY AND RIGHT-SIDED NEPHROPEXY SIMULTANEOUSLY *

W. F. GRINSTEAD, M.D.
 CAIRO, ILL.

Pexy signifies fixation. When prefixed to spleno or nephro it means fixation of the spleen or kidney.

The definition itself presupposes looseness. Both spleen and kidney have a normal degree of mobility within certain limits. This is not implied when we say floating kidney or wandering spleen. When a spleen forms a pedicle of peritoneum around its blood-vessels which permits it to fall from under the ribs to the iliac fossa, or indeed to any other region in the abdominal cavity as often happens, according to the position assumed by the patient, it is abnormally loose and produces symptoms. The same

may be said of a movable kidney. In the case of the spleen, this abnormal condition is usually brought about by an abnormal increase in weight caused by different pathological conditions. In this climate a common source of enlargement is chronic malarial infection. Since we have discovered that the festive mosquito is the peddler and inoculator of malaria and have learned to protect ourselves against him and destroy his breeding places, medical men do not see one case of hypertrophied spleen where they formerly saw a score. The other forms of splenic disease are more rare.

The movable kidney is caused by a different condition. It is much more common in women than men, and is due largely to certain types of physical conformation of the body; but tight lacing and tight belts, to which are suspended heavy wearing apparel, supply the principal causative element. Active physical exercise under tight belts counts for an etiological factor in movable kidney in men. The dragging weight on the vessels and nerves and the twisting and kinking sometimes produced in the pedicle of a loose spleen or kidney are sources of distress when the patient is erect and active and sometimes of excruciating pain. To relieve this source of invalidism has taxed the ingenuity of the surgeon.

One remedy for floating spleen is excision—splenectomy; but this treatment has a mortality of perhaps 7 per cent. Nothing is so appalling to the surgeon as mortality. The spleen is not necessary to life nor health. This fact is settled to the satisfaction of physiologists, therapeutists and surgeons. Its function is not understood even in these days of boasted wisdom and scientific acumen. Several theories have been advanced and defended, but none of them are supported by satisfactory evidence. Some physiologists believe that the spleen serves an important function in manufacturing blood-cells. Others argue that its principal activity is the destruction of cast-off red cells; but the evidence they offer is not convincing. One thing is proved satisfactorily and that is that a degree of anemia follows extirpation of the spleen and attains its maximum in two weeks to two months, after which the blood state gradually returns to normal.

Relative to the kidneys our knowledge is more satisfactory. These organs are necessary to health and life. Their function of excretion, of sewerage, is well understood. One kidney may be destroyed or removed and the other will take up its work and preserve health. I have patients from whom I have removed one kidney and they have been transferred from a state of invalidism to health. This operation which we call nephrectomy, while not extremely dangerous of itself, must be approached with caution. The other kidney may be absent or diseased or

14. Druper & Lewis, *Jour. of Industrial & Engr. Chem.*, 6, 198 (March, 1914).

15. E. B. Phelps, *J. Infect. Dis.*, 8, 27.

* Read before Southeast Missouri Medical Association, Oran, Mo., May 6, 1914.

may become diseased or destroyed by injury. We cannot give up the function of both and remain in this world.

Normally, the spleen is located under the lower ribs, from the eighth to the eleventh, on the left side, between the stomach and diaphragm. The kidney begins near the point where the spleen ends and extends downward from the level of the spinous process of the eleventh dorsal vertebra to that of the third lumbar and about two inches from the vertebral column. The kidneys rest opposite the psoas muscles. When of normal size and location they cannot be felt by the examining physician.

The following case has been of unusual interest to me, and I believe will be interesting and instructive to you.

The patient has kindly consented to come before you at this meeting to show the results of treatment. She first consulted me in August, 1907, nearly seven years ago. My record shows a diagnosis of a lacerated perineum with a prolapse of uterus to within two inches of vulva. She had endometritis. She had cystocele; also a floating spleen. She was sent to the hospital where I did a curettage and an Emmett's anterior colporrhaphy for the relief of her cystocele and a colpo-perineorrhaphy for the restoration of her perineum. On discharging her, she was advised to place a pad of folded towel under the spleen before rising in the morning and hold it in position with a muslin binder. The spleen was abnormally large and heavy from chronic malarial poisoning. She had suffered repeated attacks of chills and fever during the past few years. When in the erect position, this big spleen settled into her left iliac fossa and no doubt contributed to the descent of the uterus which pushed her bladder out of her pelvis. Her health and comfort were greatly improved by the above treatment.

She returned six years later, September, 1913, in a neurasthenic condition, and complained of dragging pain in her abdomen when on her feet and especially if she took much exercise. Physical examination revealed a tumorous mass in each iliac region when she sat erect but were easily pushed up under the short ribs when she reclined to the dorsal decubitus. With one hand below the twelfth rib over the lumbar region, the other over abdomen, in front, these masses were easily outlined through the thin parietes and were diagnosed movable kidneys. They were about the same size and had about the same range of mobility. A movable left kidney is commonly associated with movable spleen. She was advised to apply pads and binder to support the kidneys. A prescription for a tonic and digestion promotor was made; also a laxative was ordered and she was sent home. She was advised to be content with this treatment if she was fairly comfortable. If she could not proceed with her daily duties and enjoy a fair degree of comfort, I would undertake to anchor these tramp kidneys so that they would stay where they belonged.

I did not hear from her again for six or seven months when she wrote to say that she was very miserable and wanted to know what more she could do. The pads and the binder were unsatisfactory.

I advised her to go into hospital for operation, which she promptly did. Her preparation was started immediately on admission and she was operated the following morning.

She was laid on her face on the operating table with a pillow under her abdomen to produce convexity of

the loin. The right side of loin was opened first by the oblique incision. The kidney was exposed and drawn out of the body. The fatty capsule was all cut away from the inner side and half of it from the outer or front side. The capsula propria was incised from pole to pole, stripped up from kidney for an inch on both sides of the incision and folded forward. The folds of the proper capsule were united to the parietes on either side of the incision by mattress sutures of twenty-day catgut and the operation wound closed without drainage.

On the other side there is a different story to tell. A similar incision was made but when the floating mass was brought out of the body it came out of the peritoneal cavity, had a long pedicle which protruded several inches beyond the skin surface and proved to be the spleen. The left kidney was then searched for and readily felt in its normal location. The spleen was of normal size. All the old malarial hypertrophy had departed but the long pedicle remained. The question at once pressed on us, What shall we do with it? What is the best for the patient? Nothing could be easier than to amputate it and drop the pedicle back into the abdomen; but the patient was already anemic and, as above stated, anemia follows splenectomy for two weeks to two months. Moreover, the patient had just had a nephropexy on the right side which made some demand on her endurance. Was it wise to add the burden of a splenectomy? Conservatism counseled "safety first." Splenopexy was chosen. Conditions were favorable because the morbid hypertrophy, with its enormous bulk and weight, had vanished.

Splenopexy is a comparatively recent operation, but its results are encouraging. Like nephropexy, most of them are curative. The most approved methods are those of Rydygier and Bardenheuer. The former anchors the spleen in a pocket made by dissecting up the peritoneum from a transverse incision under the ribs opposite the tenth. The latter does practically the same thing, but makes a different incision and adds a suspension suture which is passed through the lower end of the spleen and over the tenth rib, thereby hanging it to the rib. To go into the details of the technic of these operations would be out of place in a paper like this.

Those of you who are interested can find these in your later books on operative surgery. In my case the logical procedure appeared to be to pocket the organ behind the peritoneum and between the latter and the lumbar fascia. This would place it external to the ureter and behind the descending colon. I found it easy to strip up the peritoneum and I soon had the spleen snugly tucked away behind it, outside the peritoneal cavity.

I then sewed up my incision in the peritoneum leaving just enough room for the pedicle without constricting it; then sutured the fascia and muscles and finally the skin. I secured union on both sides by first intension, not a drop of pus appeared on either, and I got her out of bed on the eighteenth day, and sent her home on the twenty-first. She appeared to be in good condition in every way except a despondent mental state. This had been observed by her physician before admission to

hospital. She says she feels that her old discomfort will return and that her kidneys will be loose as before. We hope to see this mental cloud disappear, with her invalidism, as her convalescence advances and that the bright side of the picture of life may be turned to her psychical perspective to inspire good cheer and comfort.

PELLAGRA IN CITY HOSPITAL*

A. H. FORTNER, M.D.
ST. LOUIS

In order not to consume any more time than is absolutely necessary, I shall present, in a sort of tabulated form, only the data which have a direct bearing on the diseases under consideration.

I find that there are only 10 cases of pellagra recorded in the hospital, 1 entering in 1910, 2 in 1912 and 7 in 1913.

There is hardly any doubt as to the correctness of the diagnosis in the majority of the cases, as most of them were agreed upon by the various specialists on the staff. There is, however, one case included in which there is doubt. This case had other symptoms of the disease and the diagnosis was thought justified by the senior and junior interns, who discovered characteristic skin lesions on the dorsi of the hands three days before death.

In considering the geographical origin of the cases, the data are probably not as accurate as they might be, but so far as can be ascertained from the histories the patients had spent most of their lives in the following states: five had always lived in Missouri; one in Indiana and Missouri, St. Louis six years; one in Kentucky and Missouri, St. Louis two months; one in Iowa and Missouri, St. Louis two years; one born in Texas, in Alabama forty-five years and Missouri two months; one came from Georgia to St. Louis thirty years ago.

ETIOLOGY

But few inquiries were made regarding this. Three stated that they had always eaten a great deal of cornbread. One was unable to give history, but the mother said that so far as she knew the patient had never eaten corn or corn products. One lived near a running stream in a sandy soil where there were sand flies.

Predisposing Causes.—The ages ranged from 34 to 60 years. Five were between 34 and 40, and 5 older. Four were females and 6 males. Seven white and 3 negroes. The 4 women did housework; 4 of the men were laborers, 1 was

a porter and 1 a barber. Previous depressing conditions were present in 6; 4 drank alcoholics to excess, 1 had always had general ill-health and 1 had had a chancre thirty years prior to entrance.

SYMPTOMATOLOGY

Gastro-Intestinal.—All had diarrhea and loss of appetite; one, nausea and vomiting; one complained of sore mouth and throat; one was jaundiced.

Neurologic Findings.—Three showed mental symptoms with general exaggeration of reflexes. Three had marked mental symptoms and sluggish reflexes. One had no mental symptoms and marked exaggeration of the reflexes in general. One had mental symptoms and reflexes apparently normal. One had mental symptoms and no mention made of reflexes. One had no mental symptoms and all reflexes sluggish. One of the cases that showed no mental symptoms had positive Babinski, Chaddock's ankle and Oppenheim's signs; she also complained of a creepy, cold, numb sensation which would come over her and last about thirty minutes. This was the only case that had sensory disturbances. The mental disturbance was slight in many of the cases, varying from marked depression to melancholia and slight dementia. One had attacks of delirium, was disoriented and had delusions.

General Symptoms.—All the patients were emaciated and weak on entrance to hospital, except one. This one lost rapidly in weight and was among the ones who died. The temperature was not high in any. One ran an irregular daily temperature of from 99 F. to 101.5 F., having 106.5 F. the day of death. Three had evening rises to 100 F. and 101 F. One ran normal up to death, when it rose to 102.6 F. Five ran a normal temperature throughout. In all cases, the temperature was taken per rectum. There was nothing characteristic about the pulse. The rate increased in direct ratio to the temperature, and became weaker and increased in rate as the disease progressed. Two of the women had menstrual disturbance; one had become irregular and one ceased menstruating at the age of 33.

Skin.—There were a few of the patients who gave a history of recurrent skin eruptions. One who had noticed that he always sunburned easily had an eruption, which he said started rather suddenly as a diffuse redness and infiltration. Vesicles soon occurred over the areas and these were replaced by crusts. There was a sharp line of demarcation and much brown pigmentation at the borders. The lesion was first noticed on the hands and arms, but later a similar one occurred on face, ears and back of neck. They were all bilateral and symmetry was perfect. He complained of an itching and burning sensation at the site of the lesions.

* Read before the Medical Society of City Hospital Alumni, March 5, 1914.

Case 2.—Erythematous, scaly eruption on the backs of the hands and feet, and a pompholyx-like eruption between the fingers and toes.

Case 3.—Sharply defined, brown, scaly areas with small, oval, white areas interspersed, occurred on flexor surfaces of both forearms, over olecranon region extending about three inches each way, and over each patellar region. All were perfectly symmetrical and bilateral.

Case 4.—Erythema and scaling on dorsi of hands and on forehead and face.

Case 5.—Symmetrical dermatitis on dorsi of both hands, extending to wrists.

Case 6.—Dermatitis with a scaling hyperkeratosis on neck, forehead and on dorsi of both hands and feet. The lesions showed a sharp line of demarcation and were perfectly symmetrical.

Case 7.—Marked dark pigmentation on the dorsal surfaces of hands and fingers extending to first joint of the fingers and upward to the wrists, also on elbows and knees and dorsal surfaces of feet. There was a similar area on right lower quadrant of the abdomen. The lesion was described as an ichthyosis with scaling and fissures. This is the only instance where the lesion occurred on parts of the body that are not exposed to light or pressure.

Case 8.—Erythematous excoriation on each side of chin and each side of anus.

Case 9.—A dark erythema on the dorsi of hands and proximal ends of the thumbs and index fingers. Symmetry perfect, and a sharp line of demarcation.

Case 10.—Dark pigmentation with white scales and flake-like desquamation on dorsal surfaces of feet and hands, palms and soles. The areas were dry, rough and non-elastic.

Duration.—It is interesting to note the rapid development and early appearance of grave conditions in the majority of the cases.

Case 1.—First symptom was the skin lesion of the hands, which occurred May 4, 1912. This patient left the hospital June 20, feeling well, but with skin lesions still present.

Case 2.—Entered hospital Aug. 8, 1910, with history of having been sick four weeks. He had never paid any attention to the eruption, as he thought it was sunburn. He died Oct. 7, 1910.

Case 3.—Entered hospital Dec. 18, 1912. The same morning her throat suddenly became painful and she was unable to talk. By December 27 she had developed diarrhea, mental confusion and skin lesion. She died suddenly Jan. 31, 1913. The throat condition was diagnosed paralysis of left recurrent laryngeal nerve by the specialist.

Case 4.—Entered hospital June 26, 1913, with history of a recent acute onset of diarrhea. Died July 4, 1913.

Case 5.—Entered hospital Sept. 29, 1913, with diarrhea of fourteen days' duration. Died October 10 of the same year.

Case 6.—Entered hospital Oct. 2, 1913, with history of diarrhea of eight months' duration. Was discharged October 10, feeling good, diarrhea checked and skin still scaling.

Case 7.—Entered hospital Sept. 9, 1913, with diarrhea and dermatitis of four months' duration. Died October 30 of same year.

Case 8.—Entered July 14, 1913, with history of diarrhea and vomiting of two weeks' duration. Had had diarrhea every summer for many years. Died July 20 of same year.

Case 9.—Entered Jan. 23, 1913, with diarrhea, sore throat and mouth, of two weeks' duration. Died July 12 of same year.

Case 10.—Entered hospital July 27, 1913, with history of diarrhea of four months' duration. Had noticed skin lesions two weeks. Died August 17 of same year.

DIAGNOSIS

All the cases were diagnosed on symptoms indicating lesions of the three great systems, viz., nervous, alimentary and skin. Nine of the cases showed gastro-intestinal, skin and nervous symptoms combined, the latter being a disturbance of reflex or psychic symptoms. One had marked gastro-intestinal symptoms and the characteristic skin lesion.

PROGNOSIS

Although the mortality is considered to be as low as 5 to 10 per cent. by some authorities, it is by no means encouraging to note the results of the cases treated here. All died with the exception of two, who left the hospital feeling well but with symptoms still present.

TREATMENT

The treatment was dietetic and symptomatic in two of the cases, one of which left the hospital greatly improved. All were given opiates and bismuth for the diarrhea. Nearly all were given a thorough test of arsenic in the form of Fowler's solution in ascending doses, beginning with 2 minims and increased to 10 or 12 minims three times a day. Several were given bisulphate or hydrobromate of quinin in 5- to 10-grain doses three times a day. Sedatives were required in some with severe nervous symptoms.

Stomach Analysis was made in one case with the following results: lactic acid, sarcinae, yeast cells and Boas-Oppler bacilli present, free HCl absent.

Urinalysis.—Five showed albumin and granular casts, two a trace of albumin and no casts, two negative, one was not made.

Blood.—The total count was made in two of the cases: (1) Total red count, 2,600,000; total white, 7,000; hemoglobin, 90 per cent. Differential: neutrophils, 84 per cent.; large mononuclears, 8.5 per cent.; small mononuclears, 6.96 per cent.; transitional, 0.8 per cent.; no eosinophils or basophils. (2) Total red count, 3,300,000; total white count, 11,000. Differential; neutrophils, 70 per cent.; large mononuclears, 10 per cent.; small mononuclears, 18.2 per cent.; eosinophils, 1.3 per cent.; no basophils.

Autopsy.—Two autopsies were made:

1. (1) Lobar pneumonia of right upper and middle lobes, second and third stages; (2) bronchopneumonia of both lungs; (3) acute purulent pleuritis of right lung; (4) myocarditis; (5) acute splenitis; (6) chronic parenchymatous and interstitial nephritis; (7) fatty liver; (8) pyelitis; (9) scars of old healed ulcers in cecum; (10) cystitis; (11) fibroma of uterus.

2. (1) Peri- and cholecystitis, purulent; (2) ascites; (3) healed pericarditis; (4) edema and congestion of lungs; (5) adhesive pleuritis; (6) atrophic spleen; (7) parenchymatous and interstitial nephritis.

CLOSING REMARKS

I trust that it will not be considered amiss to quote Dr. Isadore Dyer (New Orleans) on treatment. He offers the following outline, and states that it has been successful in his hands.

1. Make a proper diagnosis.
2. In cases with purely intestinal and cutaneous symptoms, the prognosis is always good; in the nervous types, the disease is usually of long standing and the outlook proportionately bad.
3. In all cases give diet containing every day $\frac{1}{2}$ to 1 ounce of gelatin, cooked or mixed with food. Give also, every day, the juice of two or more oranges or lemons, preferably between meals. Feed the patient well with eggs, milk and well-cooked, mixed vegetables.
4. Keep the patient out of the sun. Indoors best from sunrise to sundown; out of doors before sunrise and after sundown. This rule should be absolute.
5. Daily baths in tepid or warm water with a pound of starch (potato) added.
6. Medication: quinin hydrobromate, as much as 10 grains every three hours where diarrhea and mucous membrane irritation are bad; reduce the dose as symptoms improve, but give it throughout the attack, even all summer and all winter if there are any signs of the disease; 2 or 3 grains two or three times a day will answer as a tonic dose. Give arsenic, strychnin, iron and other tonics as the case may indicate; none of these are specific, and quinin seems to be.

7. Judge improvement by the increased body weight, appetite and general appearance.

Comment (Dyer): There is a tendency to discourage patients with pellagra, and to such an extent that in the popular mind pellagra is classed with plague. This should stop. Bad cases of pellagra die, so do bad cases of measles; ordinary cases of both get well. The patient should be told this.

City Hospital.

THE ADVISABILITY OF A PREMATRIMONIAL MEDICAL EXAMINATION FROM THE STANDPOINT OF THE WOMAN*

MARY H. MCLEAN, M.D.
ST. LOUIS

In the beginning God made woman to be a help-mate for man, and presented the first woman to the first man and said, "Therefore shall a man leave his father and his mother and shall cleave unto his wife, and they shall be one flesh." And God said unto them, "Be fruitful and multiply, and replenish the earth and subdue it."

Motherhood is the crowning glory of womanhood and must always remain so to the end of this present age, in spite of many efforts to change woman's peculiar place in the world.

This peculiar function of womanhood has not had its proper place in educational methods up to the present time. It is only within the last decade that colleges have been established, having in their curricula especial provision for thorough preparation for home life.

The University of London in King's College now has "Special Courses for the Higher Education of Women in Home Science and Household Economics." We are told that the main object of their courses is to provide a thoroughly scientific education in the principles underlying the whole organization of "Home Life," the conduct of institutes and other spheres of civic and social work in which their principles are applicable. We have one such school in Canada and one in Pittsburgh, Pa., and we need many more.

Because of lack of respect for this gift and function of motherhood, we have allowed such loose methods of marriage arrangements to prevail, that true motherhood is dethroned.

We are told by C. B. Davenport that "the general program of eugenics is clear; it is to improve the race by inducing young people to make a more reasonable selection of marriage mates; to fall in love intelligently."

* Read before the Medical Society of City Hospital Alumni, St. Louis, annual public meeting, May 4, 1914.

Thomas Carlyle once said that "the divine right of kings is the right to be kingly men." Salieby adds that "the divine right of women is the right to be queenly women." The question before us this evening is how we can invoke the aid of law and medicine in intelligent partnership to bring about great improvement in the satisfactoriness and permanence of marriage, in the promotion of queenly motherhood, and in the betterment of human progeny for present and future time.

A premarital medical examination may assist in this work in several ways:

1. It calls the attention of even the careless to the necessity of using some discrimination in the selection of a life partner. How often we have known the loved and carefully protected daughter of a good home to be married in her own station to a prosperous man, to go on a well-planned wedding trip, to return after a few months seriously ill, to be a great sufferer for weeks or months, to barely escape death possibly, and then to slowly creep back to half health, with the doom of hopeless sterility. This is no overdrawn picture, the result of ignorantly marrying a man with a highly contagious disease, gonorrhoea.

Take another picture, one from real life in my own experience. The wife of a well-salaried railway official, who survived the first shock of gonorrhoeal infection, became pregnant, bore a child who early became blind from gonorrhoeal ophthalmia, and suffered herself from a stiff elbow joint, the result of gonorrhoeal arthritis. In addition to this sorrow and physical handicap, the same woman was later infected with syphilis, and was covered with a secondary skin eruption when I saw her.

One's whole nature cries out against such a travesty on marriage, which ought to be the holiest and happiest alliance on earth. Unless girls and mothers are educated to know the existence and frequency of such diseases, and to understand the danger of marrying men who are guilty of contracting them, how can they avoid the awful consequences. Men often know, but won't tell; women do not know, and girls do not dream of possible danger. Such a law would open some blind eyes to facts.

2. It may prevent the marriage of persons who have not the mental soundness necessary for normal offspring. Woman's maternal instinct would shrink from defective progeny did she know the danger.

3. It may in a measure prevent dissemination of contagious venereal diseases, which not only destroy individual health, induce sterility, and cause innumerable divorce suits, but may entail life-long suffering and inability on the unhappy offspring. The average woman has at present no adequate source of information as to her suitor's physical fitness for marriage,

which is so closely linked also with his moral fitness. Few women would sell their birth-right of motherhood for even millions.

4. Apart from venereal diseases, mental taints and tubercular tendencies, there exist conditions which almost insure sterility, as for instance, inflammation of the testicles accompanying mumps, and pelvic conditions which furnish mechanical obstacles to normal pregnancy and labor. Much marital unhappiness arises from the invalidism in early married life of one party or the other, more often the wife, because of neglected conditions, which should have been relieved before marriage. We want to demand a good physical condition and moral fitness from men in marriage, we must also insist on good physical fitness in women, which includes normal sexual organs, and gross anatomical normality for child-bearing.

The great overshadowing blight on our present social system is the existence of venereal diseases in so large a proportion of our marriageable men as to make a happy and wholesome marriage almost the exception to the rule. Marriage cannot be abolished because of these awful facts, but science offers relief in a certain proportion of cases, and the law suggested would make men realize the necessity of availing themselves of necessary treatment, if it should fail to induce them to avoid the danger by clean morals. We believe that intelligent women would advocate a premarital medical examination as a great means of protection in individual cases, as a stimulus to general education in sex hygiene, and as an efficient public health measure.

4339 Delmar Boulevard.

REFUSED TO CALL PHYSICIAN

Georgia Cox, 10-year-old daughter of Mr. and Mrs. George M. Cox of the Rappahannock apartments, Delmar and Clara avenues, was permitted to attend school for several days while Christian Science practitioners treated her for an illness which proved to be measles, it was revealed Saturday. Dr. Maurice Thompson, assistant diagnostician for the board of health, ordered the apartment at 708 Clara avenue placarded Saturday.

The child attended the Clark school last Tuesday and Wednesday, although she had been too ill to go to school Monday. She became more seriously ill Thursday, and Cox, who is not a Christian Scientist, wished to summon a physician. Mrs. Cox told a reporter, Saturday, her faith in Walter E. Geary and his wife, Mrs. Della H. Geary, as practitioners of Christian Science, was such that she thought their ministrations to the child sufficient.

This faith, which she declared was founded on a cure effected in her own case after she had developed symptoms of tuberculosis, was not shared by her husband. He telephoned the office of Dr. M. C. Woodruff, the board of health diagnostician, Friday evening and asked an investigation of his child's case, saying he suspected measles.

Mrs. Cox said Saturday she acceded Friday night to her husband's request that a physician be called. *St. Louis Times.*

THE JOURNAL
OF THE
Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

AUGUST, 1914

EDITORIALS

STATE BOARD OF HEALTH WITH-
DRAWS MISSOURI FROM THE
REGISTRATION AREA OF
THE UNITED
STATES

Like a bolt from a clear sky came the announcement of the State Board of Health, late in June, that it had withdrawn Missouri from the registration area of the United States Census Bureau. The Committee on Health and Public Instruction, through the secretary, immediately communicated with the board and with the census bureau to ascertain the reasons for such unexpected and retrogressive action, whereupon it developed that the census bureau had angered the secretary of the state board of health by appointing a person not indorsed by him to transcribe the names from the official records of the vital statistics department for transmission to the United States Census Bureau; that the secretary of the state board of health had always held this appointment in the past; that the United States paid the appointee for performing the service; that the secretary of the board delegated this duty to another person and paid the substitute out of the sum collected by the secretary; that the census bureau, not being satisfied with this method of obtaining data for its official records, appointed another transcriber whom the bureau could hold personally responsible for the accuracy of the transcripts; that the secretary of the board held this action to be "usurpation of federal authority."

We fail to see wherein the action of the census bureau usurps any vested right of the officials of Missouri. It seems to us that the government not only has the right to name the transcriber, but that the bureau could not legally accept the transcripts unless the work was done by its own appointee. It is to be noted that no objection arose as long as the secretary of the state board received the appointment and the pay at 3 cents per name — a neat little sum, to be sure, amounting in the aggregate to something over \$1,200 per annum. It is very apparent that the secretary of the board did

not perform the service; nor could he do so and at the same time give proper attention to the duties which the state imposes on him.

The action of the board of health is a very serious matter, and unless corrected at once, Missouri will lose the prestige attaching to those states which stand for commercial and professional progress. One of the boasts of the state is her low mortality and a similar claim is made by St. Louis. Take the state out of the registration area and her vital statistics amount to nothing as an asset of state supremacy. If we cannot be included in the United States statistics, why should the state spend large sums for the collection of valueless data. Remembrance of the strong effort in the legislature made four years ago to rescind the vital statistics law should give pause to the board, for it is possible that in their zeal to garner all the perquisites flowing from the operation of the law they may destroy the bureau of vital statistics. To put it crudely but emphatically, they may kill the goose that lays the golden egg.

The medical profession of the state is deeply interested in retaining Missouri in the registration area. As a profession, we earnestly and consistently urged on the legislature the importance of passing the law and we protest against this needless destruction of its usefulness to the people and of our efforts to lift Missouri into the forefront of commonwealths that stand for progress and enlightenment.

The attention of the members is directed to another page¹ in this issue for further information on this subject.

MR. LLOYD DID NOT VOTE AGAINST
THE TRANSFER OF THE
SURGEON-GENERAL'S
LIBRARY

The resolution passed by the State Association at the Joplin meeting last May censuring the Honorable James T. Lloyd, United States Representative from the First District, for supporting the merger of the Surgeon-General's Library with the Congressional Library, brought a declaration from Mr. Lloyd that he voted against the merger. As it is never the intention of our Association to do anyone an injury nor to misrepresent the actions of our representatives in Congress or the Legislature, investigation was made of Mr. Lloyd's assertion. As a result it transpired that Mr. Lloyd *did not* vote against the merger for the simple reason that the bill containing the provision for the merger did not come to a vote in the House of Representatives. This clause was defeated in conference when the Secretary of War and the

¹. See page 97.

Senate Committee realized from the vigorous protest made by the medical profession of the country that the transfer of the Surgeon-General's Library would not conserve the best interests either of the library or of the medical profession. The entire question is lucidly expounded and the position assumed by Mr. Lloyd very definitely established by his statements to the Secretary of the St. Louis Medical Society, published on another page in this issue. The statements there made plainly show that Mr. Lloyd's attitude was very favorable to the merger; that he not only neglected to consider the request of the St. Louis Medical Society that he oppose the merger, but he offered gratuitous suggestions favoring the consolidation and bluntly informed the St. Louis Medical Society that they did not understand the situation; that he impugned the motives of the army surgeons in striving to retain the library in the Surgeon-General's office; and finally, that he quoted the opinion of the physicians of the District of Columbia as a reason for refusing to do what the physicians in the state he is supposed to represent requested him to do.

THE AMERICAN COLLEGE OF SURGEONS AND ETHICAL STANDARDS

Everyone is by this time convinced that the ends which the American College of Surgeons attempts to achieve are in the interests not only of the surgeons of this country, but of all the medical men. To elevate the standard of surgery, to have specialists in surgery equip themselves more completely and more thoroughly than hitherto, to prove by achievement and not by announcement that he is worthy of popular confidence, are objects worthy of the best endeavors. In future it will be a pronounced distinction to be a member of the American College of Surgeons for those which will be admitted after November, 1914, will gain fellowship on account of the work in surgery which they have done. The present membership is made up of those who in a general way have a reputation for having practiced surgery more or less exclusively and successfully for a number of years and of those others whose conspicuous achievements in surgery entitle them to the distinction. All the fellows have been scrutinized as to their scientific qualifications. The Board of Regents has deputized some of the work of investigation to committees in the various states, who no doubt made inquiry concerning the professional attainments of those whom this Committee or someone else had pointed out as being eligible to fellowship. That the list up to the present

writing should not contain the names of many worthy and competent men in various sections of the country is not to be wondered at, for the modesty of some has placed them in the shadow to such an extent as to be overlooked; others have not found favor with some to whose scrutiny their names have been subjected. The omission of names in the very nature of things will be corrected as soon as attention is called to them.

We have no means of knowing by what ethical standards the applicants have heretofore been measured. We do know, however, that the organized medical profession of Missouri has not been consulted concerning the ethical standing of men in this state who have been admitted to fellowship and concerning whom it would have been an easy matter to get such information as ought to have prevented the admission of undesirable practitioners. Conferring fellowship on unethical practitioners of surgery or on those who practice sectarian medicine is not calculated to enhance the value of fellowship in the eyes of the medical profession and will not make it sought by the younger men, who will gain the impression that it is not necessary to have ethical standing in order to become a fellow.

With the future of the College assured and its permanency established, one can almost say, by the unusually large contributions which were made in response to the announcement at Philadelphia, that it is intended to place the College on a firm financial basis furnished by the surgeons themselves, hence exceptional care should be exercised in the admission of fellows. Above all, the College should not forget that the great mass of the medical profession which is in thorough accord with the principles of ethics governing the medical profession of this country, has a watchful eye on the College. Much criticism will fall to the ground when the ethical standards of the College will be those of the American Medical Association.

MR. CAMPBELL'S BEQUEST TO ST. LOUIS UNIVERSITY MEDICAL DEPARTMENT

The manner of the recent gift to St. Louis University Medical School by the will of the late James Campbell is deserving of consideration. It will be remembered that Mr. Campbell directed that his entire estate, with the exception of one million dollars for the heirs of his daughters, be given twenty-one years after the death of his widow and his daughter to the St. Louis University for the erection of a hospital and the use of the medical department. It is estimated that the fund will amount

to between forty and fifty million dollars when it is available. A careful analysis of the situation warrants the assumption that much wisdom was shown in the bestowal of this gift. If Mr. Campbell had given this money for immediate use a great school could at once have been established, a greater medical school perhaps than now exists anywhere, but it would be essentially a one-man school. Other men who desired to give might look elsewhere. As the matter stands, however, with a wonderful future assured the institution, a peculiar present need is created and a unique opportunity is offered to others for giving funds to anticipate the future. What nobler use of money could be made than to contribute to the care of the sick and the advancement of medical knowledge, what greater tribute could be paid to the wisdom of such a gift than to anticipate its use with immediate gifts. St. Louis University should not be required to rest on the promises of the future. With the assurance of the absolute permanency of a great institution for the relief of suffering and the prevention of disease, it should be helped to start building toward the wonderful destiny that awaits it.

In the great Masque which all St. Louis witnessed so recently we saw the infant St. Louis placed in the arms of Cahokia to emerge a knight in armor in the time of need. St. Louis now has the opportunity to put into actual practice the suggestion of this allegory and to prepare to attack at once the greatest foe of all cities — disease.

A NEW MEDICAL JOURNAL

The *Pan-American Surgical and Medical Journal* makes its initial appearance with the June issue. This journal is published in New Orleans and begins its career in a most acceptable manner. It is crammed full of interesting, lively and entertaining articles. There are 112 pages of reading matter and twelve pages of advertisements, the latter clean, conservative and Council approved. The journal declares that it will not antagonize "any medical organ, societies or organizations so long as these keep within the straight and narrow path of medical purity and honesty, but woe unto those who practice deception and vice, 'for they shall we surely offend.'" The journal has been elected the official organ of the Louisiana State Medical Society for three years, displacing the *New Orleans Medical and Surgical Journal*. Concluding the foreword, the editors say: "In offering this journal, we promise honesty of purpose; we promise truth; we promise a medical journal ethical in every sense. We promise that our advertisements shall be governed by the standard of the American Medical Associa-

tion. We promise scientific discussions and letters of the highest class of excellence obtainable, and, above all, guarantee not to do aught that will cause a blush of shame, nor even a sigh, to those who will stand sponsor for us."

We welcome such a publication to the ranks of clean, ethical, and progressive journalism. Undoubtedly the promoters know they will meet many obstacles in their appeal for decency and truthfulness, and have prepared themselves for the contest. We sincerely hope they will win and show to the South and to the country that journalistic success in the medical field no longer depends on the wallets of the degenerate nostrum venders who made and unmade medical journals in the years before the Council on Pharmacy and Chemistry began its propaganda.

NEW DRESS FOR ANNALS OF SURGERY

The publishers of the *Annals of Surgery* announce several changes in the physical make-up of this indispensable periodical, beginning with the July, 1914 issue. The continually increasing amount of valuable material offered the *Annals* for publication compels an enlargement of the size of the page, which, in conjunction with the adoption of type somewhat reduced in size but of clear and distinct face, will make room for a greater amount of articles in each issue without materially increasing the bulk of the volume nor make it unwieldy. The publishers have at the same time given the book a new dress that is attractive and permits a clear impression of the type.

The *Annals of Surgery* began thirty years ago with contents of ninety-six pages of reading matter; it has continued to increase steadily until now the average number of pages is over 160, with special issues not infrequently numbering 300 pages. We are pleased to observe also an improvement in the character of advertisements and we look forward to this old established firm bringing all their publications into harmonious relationship with the higher ideals of practice.

The July issue contains nine articles, many of them of exceptional value not only to the surgeon, but to the general practitioner. We note among the authors the following papers by Missouri doctors:

"The Choice of Anesthetic in Operating for Abscess of the Lung," by Dr. Fred T. Murphy of St. Louis; "Melanoblastomas of the Foot (Chromatophoroma, Melanoma, Melanosarcoma)," by Dr. Arthur E. Hertzler and Edward T. Gibson of Kansas City. There are also articles by Alexis Carrel of New York on "Experimental Operation on Orifices of the Heart";

James G. Mumford and Samuel Robinson of Clifton Springs on "The Surgical Aspect of Bronchiectasis"; Willy Meyer of New York on "Bronchiectasis," and an article by Dr. George W. Crile of New York on "The Two-Stage Operation Especially in its Relation to Treatment of Cancer."

OBITUARY

CLEMENT A. JENNINGS, M.D.

Dr. C. A. Jennings, one of the oldest practitioners in central Missouri, died at his home in Salisbury, Chariton County, June 9, aged 76. Dr. Jennings was born in Halifax County, Virginia, and received a liberal literary and scientific education at the University of Virginia. He obtained his medical degree at the University of Pennsylvania in 1857. He was a surgeon in the Civil War and moved to Triplett, Mo., when the conflict was over. Later he moved to Salisbury, where he continued to live until his death. He had been an invalid for more than two years, but during his active career he was an earnest, modest and devoted practitioner, loved and revered by all who knew him. He was an active member of the County Medical Society and the State Association.

ALONZO V. THORPE, M.D.

Dr. Alonzo V. Thorpe of Jamestown, Mo., a graduate of the American Medical College of St. Louis, 1884, and of the Beaumont Hospital College, St. Louis, 1890, died at California, Mo., May 18, 1914, aged 62. Dr. Thorpe was a member of the Moniteau County Medical Society, the Missouri State Medical and a Fellow of the American Medical Association.

NEWS NOTES

ANDREW J. CHILDERS of St. Louis has been arrested on the charge of practicing medicine without a license.

DR. O. T. MOREY, Salisbury, secretary of the Chariton County Medical Society, has been ill at his home with an attack of grippe.

DR. T. O. KLINGNER of Springfield, councilor for the 28th District, has been appointed assistant oculist for the Frisco Railroad at Springfield.

THE United States Government has indicted twenty advertising doctors in San Francisco for using the mails to defraud. Many Chinese "specialists" are said to be in the list.

DR. J. B. WRIGHT, Trenton, councilor of the 4th District, delivered an address on "Preventive Medicine" at a meeting of the Daughters of the American Revolution at St. Joseph.

THE health committee of the Commerce Club of St. Joseph, of which Dr. Daniel Morton is chairman, is agitating a movement to obtain more ambulances for the health department of that city.

DR. H. G. SAVAGE of Warsaw has been appointed a member of the board of managers of State Hospital No. 3 at Nevada, to take the place of Dr. John C. Nunn of Nevada, who resigned.

DR. JAMES H. ELLIOTT, councilor for the 27th District, West Plains, has been appointed local surgeon for the Frisco Railroad. Dr. Elliott has been quite sick for several weeks but is convalescent.

DR. M. P. RAVENEL has accepted the position of Professor of Medical Bacteriology at the University of Missouri. Dr. Ravenel is nationally prominent as a bacteriologist and public health advocate and has published numerous works on these subjects.

DR. RALPH A. KINSELLA has been appointed chief resident physician at the City Hospital, St. Louis. Dr. B. W. Klippel was appointed resident surgeon succeeding Dr. Fred Hagler, and Dr. E. E. Kneale was appointed resident physician at the Isolation Hospital.

THE recently completed infirmary building of the State Sanitarium for Tuberculosis at Mt. Vernon has been turned over to the state by the contractors. The building is one of the most modern and complete of its kind in the country and was erected at a cost of \$35,000.

THE Nebraska State Medical Society at its recent meeting appointed a committee to prepare plans for establishing a journal to be owned by the association and supersede the present arrangement of publishing the transactions under contract with the Western Medical Review.

MEDICAL inspection of schoolchildren will be inaugurated this fall at Springfield. The Greene County Medical Society in conjunction with the Mothers' Club and other social organizations, has been agitating this movement for a long time. Dr. W. P. Patterson is chairman of the committee having in charge the plans to be approved by the school board.

THE St. Louis Society for the Relief and Prevention of Tuberculosis reports 114 new cases of tuberculosis found and treated by the society during June. This is a much larger percentage than in any other month and is due to the increased facilities of the society and the larger number of visiting nurses employed.

PENNSYLVANIA recently added a clause to the Medical Practice Act requiring that all persons practicing the minor branches of medicine be licensed by the State Board of Medical Education. The attorney-general declares that optometrists come within the purview of this law. Optometrists have refused to apply for such license and threaten to take the question to the courts.

THE St. Joseph-Buchanan-Andrew County Medical Society has changed its name to the Buchanan County Medical Society and a new charter has been issued to it. The members in Andrew County will continue to hold affiliation through the Buchanan County Medical Society until an organization is completed in that county. The Buchanan County Medical Society has been granted papers of incorporation.

PROF. LUDWIG PICK, professor of pathology at the University of Berlin, spent three days in St. Louis last week. He visited America in response to an invitation to deliver a series of lectures in Buffalo, N. Y. After completing his lectures he visited Yellowstone Park, and returned home by way of St. Louis. He was powerfully impressed both by the medical activity and the medical possibilities of St. Louis.

THE Board of Education at St. Louis has decided to extend medical inspection to all schoolchildren in that city. Until now medical inspection has been limited to twenty-six schools, leaving unprotected about ninety-four schools. The board will employ additional physicians and nurses in order to give protection to all schoolchildren. The board has also approved plans for another open-air school to accommodate 150 children.

THE American Roentgen Ray Society will meet in Cleveland at the Hotel Hollenden on September 9 to 12, inclusive, 1914. The program promises to be of unusual interest and value, and includes a paper by Dessauer of Frankfort, on the subject of artificial production of gamma rays; Coolidge, the inventor of the Coolidge tube, Shearer and Duanne will also read papers. The subject of deep therapy and the production of the hard rays will be fully presented and discussed. The rest of the

program will be taken up by a large number of papers on general subjects. The medical profession is cordially invited to attend these meetings.

SINCE publication of *New and Nonofficial Remedies, 1914*, the following articles have been accepted for inclusion with *N. N. R.* Those accepted during the current month are made prominent by the use of capitals.

H. M. Alexander & Co.: Normal Horse Serum; Typhoid Vaccine, Immunizing.

Antiseptic Supply Co.: Causticks; Caustick Applicators; Cupricsticks; Stypticks; STYPTICK APPLICATORS, ALUM 75 per cent.

Arlington Chemical Co.: Arlco-Urease.

Comar and Cie: Electrargol; ELECTRARGOL FOR INJECTION 10 Cc. AMPOULES.

Farbwerke Hoechst Co.: Amphotropin; Erepton.

Fairchild Bros. & Foster: Trypsin.

Franco-American Ferment Co.: Lactobacilline Tablets; Lactobacilline Liquide; Culture A; Lactobacilline Liquide, Culture D; Lactobacilline Liquide, Infant Culture; Lactobacilline Glycogene Tablets; Lactobacilline Glycogene Liquide; Lactobacilline Milk Tablets; Lactobacilline Milk Ferment; Lactobacilline Suspension.

Hoffmann-LaRoche Chemical Works: Thiocol; Syrup Thiocol, Roche; Thiocol Tablets.

Hynson, Westcott & Co.: Phenolsulphonephthalein, H. W. & Co.; Phenolsulphonephthalein Ampules, H. W. & Co.; UREASE-DUNNING.

Merck & Co.: Cerolin.

H. K. Mulford Co.: Acne Serobacterin; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Coli Serobacterin; Culture of Bulgarian Bacillus, Mulford; Disinfectant Krelon, Mulford; Neisser Serobacterin; Pneumo Serobacterin; Salicylos; Scarlatina Strepto Serobacterin; Staphlo-Serobacterin; Staphylo Acne Serobacterin; Strepto Serobacterin; Typho Serobacterin.

Riedel & Co.: New Bornyval.

Reinchild Chemical Co.: Phenolphthalein Agar.

E. R. Squibb & Sons: Sodium Biphosphate, Squibb; Tetanus Antitoxin, Squibb; Tetanus Antitoxin, Squibb, 5,000 Units.

MEMBERSHIP CHANGES, JUNE

NEW MEMBERS

Baird, J. Edward, Excelsior Springs.
Bess, W. E., West Plains.
Bourbon, Oliver P., Kansas City.
Coombs, Miller O., Joplin.
Coon, Earle H., Grand Pass.
Eliscu, F., St. Joseph.

Halley, Claude D., Grand Pass.
 Hedrick, James F., Weatherby.
 Hendrix, J. F., White Church.
 Helle, Augusta, St. Louis.
 McGinnis, Chas. Q., St. Louis.
 Moody, Benj. E., Clarence.
 Pare, Elijah Y., Leeton.
 Pease, C. H., Wyatt.
 Peden, Samuel E., St. Louis
 Pritchett, Paul L., Webb City.
 Shroat, Loren G., Marshfield.
 Walters, Arthur E., Webster Groves.

CHANGES OF ADDRESS

Ament, W. F., Aurora, Mo., to Ft. Smith,
 Ark.
 Cline, Jesse A., Vanduser to Oran.
 Geeslin, P. A., Luray to Kahoka.
 Lee, Frank, Honolulu, Hawaii to Los An-
 geles, Cal.
 Nevins, R. C., Wheatland to Flemington.
 Quinton, Chas. B., Mt. Vernon, Mo., to
 Houston, Texas.
 Williams, Geo., Fulton to Odessa.

REINSTATED

Montgomery, Wm. E., Kansas City.

DECEASED

Fulkerson, J. J., Lexington.
 Jennings, Clarence A., Salisbury.

CORRESPONDENCE

CONGRESSMAN LLOYD AND THE MEDICAL PROFESSION OF MISSOURI

Below we publish the correspondence with the Honorable James T. Lloyd concerning his attitude toward the merger of the Surgeon-General's Library with the Congressional Library. The first document is the resolution adopted by the St. Louis Medical Society at its meeting of April 4, as follows:

Dr. Frank J. Lutz proposed the following resolutions which, on motion, were unanimously adopted:

"The St. Louis Medical Society has learned with grave concern that the Army appropriation bill just passed by the senate of the United States contains a provision whereby the Surgeon General's Library is to be transferred to and become a part of the Library of Congress.

"To make the largest, best-equipped, best-conducted medical library in the world, which, through the index catalogue, furnishes bibliographical data for all the physicians, medical educational institutions and scientific medical associations, and which is accessible to the medical men of all sections of this country, a subordinate department of a general library is in the opinion of this society a reactionary and unwise policy which would lower the scientific standing of the United States in the civilized world. To rob the magnificent surgeon general's library of its autonomy would prevent it from continuing its splendid work which can be done only if the library is in charge

of carefully chosen, scientific medical men; it would entail additional and unnecessary expense on the people, and the usefulness of the library would be seriously impaired.

"The secretary of this society is hereby instructed to convey this expression of our disapproval of the proposed transfer to the Missouri members of the House of Representatives with the respectful request that they make every endeavor to prevent this unjustifiable and destructive legislation."

With the exception of Mr. Lloyd, replies were received from our representatives either stating that they would oppose the merger or give the subject proper consideration. Mr. Lloyd took occasion to reply as follows:

WASHINGTON, D. C., April 8, 1914.

F. C. E. KUHLMANN, M.D.,
 St. Louis, Mo.

My Dear Doctor:—

I am in receipt of your favor enclosing resolutions of the St. Louis Medical Society with reference to the Surgeon General's Library. I am not sure you understand the situation.

The Surgeon General's Library is not open to the public. The purpose of transferring it to the Library of Congress is to place it where all physicians may have an opportunity of its use. The library at present is only accessible between the hours of nine o'clock and four-thirty, while the library if made a part of the Congressional Library would be open until ten o'clock at night.

The Congressional Library is a general library, and has books of all classes and belonging to all professions, and is intended to afford the general public an opportunity of investigation of any known subject. It is alleged here that this library in addition to being more accessible to the medical profession could be conducted more cheaply in connection with the great Congressional Library, and there seems to be no objection here except from the Surgeon General, who wishes to keep the library in his own office. Physicians in the city, as far as I am informed, would much prefer that this library be transferred to the Library of Congress where they may have access to it, and have the same rights of access as any other parties.

If the library is transferred there will be experts in charge of it just as it would be where it now is, and the impression as far as I have gathered it from the physicians here, is that they would much prefer the change of the location of the library.

Surgeons connected with the Army for their own convenience prefer that this library shall be under their immediate control and shall be in the office of the Surgeon General. But it seems to me that the medical profession would be better served and it would be of much more accommodation to them if the library was a part of the Library of Congress, the greatest library in America.

I do not understand why the Library of Congress should not have every known medical publication, and why there should not be in that library every reputable medical journal, nor why that library should not become the greatest law library in the land. And why it should not develop to be the greatest library in every line that can be found in this country.

The world has never produced a library building to compare with the Library of Congress. It is under splendid management, is quite popular with those who come in contact with it and I fear that your opposition to the proposed legislation is based on misapprehension of the real situation.

Sincerely yours,
 JAMES T. LLOYD.

At the meeting of the State Association in Joplin, May 12, this letter was read in the House of Delegates and the statement was made that no further communication from Mr. Lloyd had been received, indicating that he intended to change his attitude and oppose the merger as requested by the St. Louis Medical Society. Thereupon, resolutions censuring Mr. Lloyd's attitude and approving the action of other representatives from Missouri were adopted and the Secretary was instructed to send a copy to all members in Mr. Lloyd's district. In accordance with this order the Secretary sent the following letter to our members in the First Congressional District:

St. LOUIS, May 29, 1914.

Dear Doctor:—

The Hon. James T. Lloyd who represents your district in Congress recently supported the effort to transfer the Library of the Surgeon General's office to the Congressional Library in spite of the protest of the entire organized medical profession of the country.

At the Joplin meeting of the Association, May 12-14, 1914, the House of Delegates adopted the following resolutions:

Resolved, That this Association especially approves the action of representatives in Congress, Hon. Walter L. Hensley, Hon. Thomas L. Ruby, Hon. Charles H. Booher, Hon. William P. Borland, Hon. Richard Barthold, Hon. L. C. Dyer and Hon. William L. Igoe in voting against the effort to merge the Surgeon General's Library with the Congressional Library and condemns that of the representative of the First District, the Hon. James T. Lloyd, in voting in its favor, and, be it further

Resolved, That the secretary is instructed to send a copy of these resolutions to every member of this Association in Mr. Lloyd's district.

I send this information to you so that you may exercise your suffrage in the coming primaries in favor of a representative in Congress who will exhibit a decent respect for the opinion of the medical men in this state on matters touching our professional usefulness to the people as well as on all matters of public health welfare.

We consider ourselves better judges than a layman of what is beneficial to the advancement of the medical profession and of science, and we distinctly disapprove of the attitude assumed by Mr. Lloyd in regard to our knowledge of the actual status of affairs concerning the Library of the Surgeon General's office.

Trusting you will give the Association your loyal support in this matter, I am

Very sincerely yours,
E. J. GOODWIN,
Secretary-Editor.

On June 1 Mr. Lloyd wrote the Secretary of the St. Louis Medical Society as follows:

DR. F. C. E. KUHLMANN,
3525 Pine St.,
St. Louis, Mo.

June 1, 1914.

My Dear Doctor:—

I received from you April 8 a communication with reference to the Surgeon General's Library, which was answered at the time, and it is possible that from that letter an impression has gone out that I was in favor of the merger of the two libraries. My

purpose in the answer to you was to give you the argument that was made in favor of the merger by those who advocate it—but following that, the amendment to the Army Appropriation Bill came to the House and I voted *against* the amendment.

I write this because I am advised that somebody has charged somewhere that I was actively supporting this proposed merger. As far as I have information I have never received any communication from anyone excepting yourself with reference to the matter, and I now write to you because it has been called to my attention that I was censured at the State Convention at Joplin for supporting the measure. Any statement that I supported the measure is absolutely false, and I would appreciate it very much if you are in any way responsible for the circulation of the report, that I was supporting the measure, that you correct it.

Sincerely yours,
JAMES T. LLOYD.

Attention is directed to Mr. Lloyd's statement in the first paragraph of the above letter, "the amendment to the army appropriation bill came to the House and I voted *against* the amendment." The fact is that the amendment was stricken out of the appropriation bill in conference; the bill has not yet reached the House, and, therefore, Mr. Lloyd did not vote against the amendment. In reply to the above letter the Secretary of the St. Louis Medical Society sent the following communication to Mr. Lloyd:

St. LOUIS, June 15, 1914.

HON. JAMES T. LLOYD,
House of Representatives,
Washington, D. C.

Dear Sir:

In reply to yours of the first instant, concerning your relationship to the merger of the Surgeon General's Library with the Library of Congress, permit me to state that on April 6 I sent you a copy of the resolutions passed by the St. Louis Medical Society condemning the proposed merger as contrary to the best interests of medical science and of the medical profession and respectfully requested you to oppose the proposed merger.

In your reply of April 8 you furnish the reasons why this library should be transferred, offering a number of allegations made by parties unknown and presenting the arguments in favor of the transfer as though you held a brief for those who wished to accomplish this unnecessary, expensive and destructive piece of legislation.

You cited the opinions of physicians of Washington, D. C., as to what their wishes were in the premises and referred to the views of the surgeons of the Army as being actuated by their desire to maintain the autonomy of the library simply for their convenience.

The medical profession of St. Louis as represented by the St. Louis Medical Society is thoroughly familiar with the Surgeon General's Library, its position in the literary and scientific world and has strong convictions as to maintaining the autonomy of the library.

We do not object to your advocacy of the Library of Congress and your desire to make it a still greater library but we do object and will continue to object to making the Surgeon General's Library, which is the library of the medical profession of this country, an appanage of the Congressional Library, however large the latter may be.

We did not ask you for an expression of opinion concerning our understanding of the situation for we felt that our opposition was based on a fair and clear knowledge of the conditions. Whether you voted for the proposed merger or not is not to the point. We asked you to oppose the transfer. In answer you gave us the reasons why the transfer should be made and we had a right to assume that you would by your vote support the position which you had indicated in your letter. Nor had we information to the contrary and it was only after the State Medical Association had condemned your attitude that you insisted that you be recorded as having voted against the transfer.

We may be mistaken in the assumption that you represent the doctors of Missouri, and not those of the District of Columbia, in all matters affecting legislation but we insist that the natural inference would be that a representative in Congress would listen to the wishes of his constituents and not to those who contribute nothing toward his election.

It comes in bad grace for you now to assume the attitude that a great wrong has been done you by condemning your position. We maintain, and will continue to do so, that you did not comply with the very respectfully expressed wishes of your constituents and have so expressed ourselves publicly and will continue to do so.

I have the honor to be

Very respectfully yours,

F. C. E. KUHLMANN,
Secretary.

STATE BOARD WITHDRAWS FROM THE UNITED STATES REGISTRATION AREA

When the State Board of Health announced in the latter part of June that it had withdrawn Missouri from the Registration Area of the United States Census Bureau, the secretary of the State Medical Association immediately inquired of the Board and the Census Bureau why such retrogressive action had been taken. The following correspondence resulted from the inquiry:

DR. E. J. GOODWIN,
St. Louis, Mo.

Dear Doctor:—Your letter regarding the withdrawal of Missouri from the registration area is at hand. This came about through the ruling of the Director of the Census, Dr. W. M. Harris.

The certificates and all the documents pertaining to this office are under the care and supervision of the secretary of the State Board of Health and the director of the census heretofore appointed the secretary to transcribe the death certificates for the United States, and other secretaries of boards throughout the registration area were extended this courtesy. Usually the secretary appointed a transcriber and the whole matter of transcribing was under the direction of the board of health. But without warning or notice of change of policy the director made an appointment at Washington of a transcriber who was sent into this office the first of June to do this work. The board of health felt that this was a usurpation of federal authority contrary to all use heretofore practiced and withdrew from the registration area; with nearly all of the registration states doing the same thing. * * *

J. A. B. ADCOCK,
Secretary Missouri State Board of Health.

WASHINGTON, D. C., July 9, 1914.

DR. E. J. GOODWIN, Secretary-Editor,
Missouri State Medical Association,
3525 Pine St., St. Louis, Mo.

Dear Sir:—Your letter of June 30, addressed to the director, reached him just as he was leaving the city for a short time, and he requested me to write you concerning Dr. Adcock's withdrawal of the state of Missouri from the registration area. Dr. Adcock's action in this case has been taken because of his disagreement with this Bureau in the selection of the person to make the transcripts of the records of deaths for the state. Dr. Adcock was the transcriber last year, but the Bureau desired to name another person for the year 1914. Dr. Adcock objected to the change, believing, of course, that he should still hold his position whether or not the Bureau desired to retain him, but the Bureau, exercising the authority vested in it by law, selected another person to make the transcripts of the records of death in that state. After giving our representative permission to copy the records, he later refused, and immediately withdrew his state from the registration area.

There is not any question about the competency of the representative selected by the Bureau to do this work. The appropriation for the work is made by the Congress of the United States, and under the law the person who actually does the work should receive the compensation therefor. Then again, the Bureau desires to have a representative whom it could hold personally responsible.

We do not understand the position assumed by Dr. Adcock—that the records of deaths in his office are private property over which he alone has control, and that he can give or refuse access to a representative of the federal government, if he desires to do so. We believe that the vital statistics records of the state of Missouri should be open to the public of the state, as well as to a representative of the federal government. These records are, or should be, public property, and no doubt the people of Missouri and the courts of the state would decide the contention in our favor, if the matter should be submitted to them.

I am sending you enclosed a copy of the circular letter which Director Harris sent to the state registrars. This letter gives you the general reasons for the change in the policy of the Bureau.

It will give me a great deal of pleasure to be of service to you in any way we possibly can. Appreciating your interest in this matter and realizing the great interest the physicians of your state have in the work of the Bureau of Census along the lines of vital statistics, I am,

Very truly yours,
W. L. AUSTIN,
Acting Director.

DEPARTMENT OF COMMERCE
Bureau of the Census
WASHINGTON

June 30, 1914.

Dear Sir:—Referring to the change in the Bureau's method of selecting persons to make transcripts of deaths, which has caused some unfriendly comment, I desire to state, for your information, the Bureau's chief reason for the action taken.

In some cases, the state or municipal official designated to do the work had transferred his authority to a subordinate in his office (sometimes a member of his family), the person actually doing the work receiving such pay as the official might allow him out of the amount he received from the Census Bureau, the balance (in some instances as much as half the amount allowed for the work), going to this official who had performed no service. Legally, the government should pay only persons who actually renders service, and the transactions of these officials were, therefore, not in accordance with the law.

It is understood that the Bureau's rate of pay, which is much higher than the state rate, has been the cause of some of the trouble, and an effort will be made to adjust this rate by the time we begin the work for next year.

When it takes up the question of these designations for next year, the Bureau will request the state or municipal officials to recommend suitable transcribers before making selections. It will be specifically understood, however, that no members of the families of these officials, or their relatives, will be employed. As a rule better service is obtained when relatives are not selected, and outside criticism is also avoided. The Bureau intends to select for this work in the future only those persons who are able to do it themselves and who can be held personally responsible for it.

A number of competent persons have already been selected in the different states to make transcripts of deaths for the calendar year 1914, and the Bureau earnestly asks the cooperation of the state and municipal officials in order that it may be possible for these persons to proceed with the work. Awaiting a favorable reply by return mail, I am,

Very respectfully,
WILLIAM J. HARRIS,
Director.

We publish comments from the editorial pages of newspapers exemplifying the importance of Missouri being retained in the Registration Area:

WHO OWNS MISSOURI?

Who owns Missouri? Is it a few officials or is it the people who elected them, or who elected those who appointed them?

Judging from the personal way in which some officials conduct their offices they seem to think that it is they who own Missouri.

Take the State Board of Health, for instance, in the matter of withdrawing Missouri from the federal registration area of vital statistics because the United States Census Bureau did not appoint the individual its members desired to do the copying at three cents a name.

What do the people of Missouri care about who does this copying, provided he does a good job?

What right have the officials of the State Board of Health to cut Missouri off from her proper place as a part of the civilization of the United States because a favorite loses a \$1,500 job?

Missouri has suffered long enough from that sort of job politics.

It is time we had somebody in office who has a soul above jobs.

Missouri's vital statistics are poor and incomplete enough at best, but such as they are they should be in the census statistics of the United States. They are not the personal property of the members of the State Board of Health nor of the head of the Bureau of Vital Statistics. They are the property of the people of Missouri, and the people of Missouri do not want them denied to the Census Bureau of the United States.

It is time public officials got over this habit of imagining they own their offices and all they contain, and that offices are meant to supply jobs.

Officials of that stripe are fast losing popularity with the people.—St. Louis *Star*.

IS IT TOO LATE TO MEND?

The Secretary of the State Board of Health of Missouri recently refused to permit the Census Bureau of the United States to transcribe the records of vital statistics in his office because he was not permitted to appoint the copyist. The Bureau in-

sisted on selecting its own representative and, when the disagreement could not be settled, decided to publish its annual report with Missouri left out.

The report of the Bureau on the rates of births and deaths, the prevalence of disease and kindred matters is important to scientific men. It contains the records for many states and facilitates comparison of methods and results in dealing with public health problems. Among the men who deal with such matters one is accustomed to find breadth of view, tolerance and the subordination of personal interests to the public good. A petty squabble over the appointment of a copyist, however, proved large enough to hide from the vision of those concerned the really important aspects of the matter. Besides this loss to students of public health problems the state suffers a loss. One of its great assets is its salubrity, as shown by comparative statistics, but it will not be realized unless it is advertised. The census report is one of Missouri's best advertisements.

A similar question is likely to arise next year. It is to be hoped that when that time comes the secretary will not continue to regard the public records of this state as so much his personal property that he may use them for the purpose of gathering patronage unto himself and lock them up when patronage is denied. And, by the way, is it too late to undo the harm already done? Cannot the board go back to "the light of reason" even now? Will the people of the state tamely acquiesce in this unwarrantable action?—St. Louis *Republic*.

IS MISSOURI TO BE CLASSED WITH CHINA AND INDIA?

Unless Dr. Adcock reverses his announced determination to refuse access to the vital statistics of the state, by a representative of the federal government, Missouri will not be included in the vital statistics registered area of the United States, which means that the state will not be considered civilized by other nations, to which the health statistics of this government are sent.

We had occasion, when Dr. Adcock ruled that the copies of these statistics must be made by his appointees or not at all, to question the legal or moral right of the State Board of Health to refuse access to the figures to anyone. These figures are public property, and, if, for the sake of accuracy, the federal government insists that its own men shall do the work, the state officials have no legal right to refuse access to these documents. The United States government pays for the work, and it is because the state officials desire to name the ones who are to receive the pay, that the state is to suffer.

This is Bourbonism of the purest type, the Bourbonism that we thought had been extinct for many years. In his letter to Dr. Adcock, William J. Harris, Director of the Census, says, in part:

"In some cases, the state or municipal official designated to do the work, has transferred his authority to a subordinate or some member of his family, the person actually doing the work receiving such pay as the official might allow him out of the amount paid by the Census Bureau. The balance, in some instances as much as half, going to the official who performed no work. Legally, the government can pay only those who actually render service, hence these transactions were illegal.

"We do not understand the position assumed by Dr. Adcock—that the records of deaths in his office are private property over which he alone has control, and that he can give or refuse access to a representative of the federal government, if he desires to do so. We believe that the vital statistics records of the state of Missouri should be open to the public of the state, as well as to a representative of the federal government. These records are, or should be, public property, and no doubt the people of Mis-

souri and the courts of the state would decide the contention in our favor, if the matter should be submitted to them."

The position taken by Director Harris is not only the correct one, but the only legal one he could take. The question resolves itself into whether or not a state official shall designate who shall receive the money, and it is questionable if any court would uphold the refusal of an official to permit any authorized, or even unauthorized, representative of the federal government to copy a public record.

Those who are against the practice of Bourbonism, strongly deprecate any official stubbornness which will result in the state of Missouri being classed with China and India as a state in which vital statistics are not kept.—*St. Louis Star*.

MISCELLANY

ATLANTIC CITY SESSION AMERICAN MEDICAL ASSOCIATION

Address of Welcome by Attorney-General
John Westcott

This whole proceeding at the present time suggests a physician direct to the point, without fuss and without feathers, and the incongruity of the situation is that a lawyer should be among you. A lawyer among doctors is perhaps not in the right place (laughter), yet I can readily see that he is in the right place because, being a necessary evil, and the function of the physician being that to exclude necessary evils, the best way to get rid of the lawyer is to put him among physicians. (Laughter.)

You have been welcomed by the mayor to the queen of all summer resorts. You have been welcomed by the president of the medical society of the great state of New Jersey. Through the governor of New Jersey, a man whose mind is sensitive to modern progress, I am commissioned in behalf of the state to welcome you. The great difficulty is for a lawyer to know the appropriate thing to say. I once heard of a young man who was much concerned about his destiny and his duty as a human being. After looking over the field carefully, he concluded that he could do the most good by saving human souls, so he became a preacher. Very soon he was disabused of his misconception and he found that men were more concerned about their bodies than they were about their souls. He straightway became a physician. He soon perceived the error of his second choice and found that, after all, men were more concerned about their pocketbooks than either their bodies or souls, so he became a lawyer. (Laughter.) I believe that men are destined to care less for their pocketbooks than they care for their souls and bodies. I believe that the human family is coming to realize that the soul and body are so closely identified that you cannot have a great soul without a great body. (Applause.)

The medical profession from the point of view of a stupid lawyer seems up to this time to have a profession of empiricism, a profession of individual action, and almost necessarily so because the physician deals with a specific case all the time and he never knows its parallel exactly; and I will remark in passing that it is said of the lawyer that he is a machine and the only machine on earth that when once set going never knows when to stop. (Laughter.)

I was about to observe that the medical profession has developed a peculiar type of courage. The martyr goes to his doom; a soldier now and then goes to his death under circumstances of tremendous dramatic significance—excitement. The doctor, on the other hand, not once in a century, not when a war occurs, but hourly, every day of his life, not under circumstances of excitement, but under conditions of mental calm, under the force of poise, confronts not only danger, but actually walks into the jaws of death, and he does it silently, unknown, unseen and unsung. Hence the physician by the necessity of his training and calling has developed a peculiar type of courage, and I do not hesitate to say, the highest species of courage known to the human animal. The force of that remark is to be found in what I am now about to say. The medical profession up to now has been a profession of separateness, if I may use the expression. The physician has had to go it alone. The characteristic of the age is cooperation. Cooperation is the expression of economy. The physician finally has come to appreciate the power of coordination and cooperation; hence your presence here to-day. I trust, and I have no doubt it will come to pass, that not only every state will have its medical organization, but also every county in every state; and every county organization should be closely affiliated with the state organization and every state organization with the national organization; then with 250,000 of the bravest men in the land thus coordinated, thus cooperating, much will be done for the redemption of society or its improvement. (Applause.) Such a cooperative scheme will result in the oneness of purpose that is simply resistless; therefore, such an organization can effect legislation in every state in the Union, and in the national legislature, looking to the improvement of the people. When I say improvement of the people, what do I mean? I mean morals, religion as well as physical conditions, because without complete physical conditions you cannot have a complete morality, nor can you have a sound theology, nor can you have an inspiring religion. The physician up to now, as I understand it, while he has labored at the foundation of society, has done so piecemeal. You have worked at each block of stone in the foundation, but not at the foundation by a scheme and

a general purpose; consequently you have scattered far; now you are concentrating your energy. Therefore, I say, the physician is a philosopher; he is an economist; he is a politician, and I go so far as to say that the soundness of our institutions and their perpetuity rest more in the hands of the medical profession than in the hands of any other class of men. In the hands of the medical profession rests the future of this country, because in the hands of your profession rest the physical lives of the country, because in the soundness of the physical life of the country rests its morality, its religion and its patriotism. (Applause.)

One more suggestion or concluding observation is this: I have observed that the human animal is a susceptible creature in every direction. I am not going to talk about the philosophy of love. The average man or woman in picking up a newspaper and reading an advertisement in relation to his health will by the constructive processes of his imagination immediately appropriate as a part of his own physical life the delineation of every symptom that he finds stated in that advertisement as belonging to him, and the disease which that advertisement portrays in such awful colors, as his disease. Such is the plasticity of the human mind. At the end of that advertisement there is a proposition to cure that disease, and it is immediately believed and straightway the reader of that advertisement hies himself to a drug-store and buys his freedom from disease. What does he buy? He buys a compound. What is that compound? God only knows. It is called euphionously a proprietary concoction. This concoction is not created with scientific knowledge, but with a correct comprehension of human weakness, impelled by the desire in the creator of the compound to do what a lawyer does—take everybody's money in sight. (Laughter.) Statistics on the subject are obtainable, I am told. I have seen some; but how reliable they are I do not know. I assume from the sources that these statistics are approximately correct. While not wearying you with statistics, you will agree with me in the assertion that the American people are every moment of their lives, every hour in the day, every day in the week, every week in the month, and every month in the year, consuming these unknowable compounds, when they are in the solid form, by the ton; when they are in the liquid form, by the hogshead—millions of gallons of this liquid stuff are consumed by the American people annually. In other words, the very foundations of society have poured into them every day destruction through proprietary medicines. What are you doctors going to do about it? You are organized. Your organization will become more and more perfect every day if you have the courage of which I have spoken,

and I know you have, to keep on agitating this question for the benefit of the people. See that the manufacturers of these poisons are hedged about by such legislative reforms as hedge you about and compel you to know what you are doing. (Applause.)

So, I conclude, Mr. President, with the laudation not only that your profession carries in the hollow of its hand the destinies of this country, but also that your most conspicuous duty at the present time is to see that the American people are saved from a continuous process of poisoning through liberated ignorance. (Loud and prolonged applause.)

**Presentation of Gold Medal to
Surgeon-General Gorgas**

Dr. Witherspoon said that one of the acts of his administration was to appoint a special committee, of which Dr. Charles A. L. Reed was made chairman, and he asked Dr. Reed to make a report for that committee.

Dr. Reed said:

Mr. President: It is my privilege and happiness to present to you an illustrious member of the medical profession to be the recipient of a gold medal of appreciation now to be conferred by the American Medical Association. Citizen of the republic, graduate in arts and medicine, doctor of science from renowned institutions at home and over seas, army surgeon designated and promoted by special act of Congress to eradicate yellow fever from Havana, member of the Isthmian Canal Commission, chief sanitary officer of the Isthmian Canal Zone, international consultant on great sanitary problems, Fellow and former President of the American Medical Association, honorary and associate fellow of numerous foreign scientific associations, now Surgeon-General of the United States Army, illustrious scientist, executive, writer and scholar, William Crawford Gorgas, Sanitarian, whose genius made possible the construction of the Isthmian Canal. (Applause.)

President Witherspoon continued:

General Gorgas, one of the acts of my administration, of which I am very proud, was the appointment of this special committee for the purpose of showing to the world our appreciation of ability, our appreciation of greatness, our appreciation of that wonderful genius which has made it possible, sir, for you not only to demonstrate to the world that it was possible to build the Panama Canal, but also to go further and show, as you have done, that 500,000 lives which have been lost in our country by preventable diseases can be and will be prevented finally with you at the head of the Army of our country. We hope you will

always be at the head of the sanitary protection of our people.

As retiring president of the American Medical Association, it gives me great pleasure to turn over and to present to you, General Gorgas, a gold medal in commemoration of your wonderful ability and your wonderful work that has connected nations and has taught the world that the American Medical Association contains a man who dared to do what was right for the salvation of mankind. (Loud and prolonged applause.)

General Gorgas, in accepting the gold medal, said:

I thank you, Mr. President and Fellows of the American Medical Association. I appreciate, of course, the great honor of this occasion, but I would like to have you think that this honor is to be shared by three or four hundred young Americans who have labored in

point. The work of the sections was highly commended, a progressive spirit pervading all the contributions while several papers of very great importance were presented. The opening exercises were impressive and marked an unusual solemnity when President Witherspoon decorated Dr. Gorgas with the gold medal presented to him by the Association. On another page we reproduce a photograph of the medal and the addresses made at the presentation.

A very stirring address by the Honorable John Westcott, Attorney General of New Jersey, who welcomed the Association on behalf of the state, in which he lauded the profession for achievements already won and spurred the Fellows to continue the fight for national health, compelled the belief that his words were forced by faith in the high purposes of the medical organization and were not the oratorical blandishments of a finished speaker. His



Medal presented to Surgeon-General Gorgas by the American Medical Association.

this sanitary work on the Canal Zone, and I receive this medal in part as their chief and as their representative. Again, I thank you. (Loud applause.)

President Witherspoon then said:

The final act of my administration is to introduce to you the man of your choice to preside over your deliberations next year.

I want to say in retiring that my labors have been pleasant; they have been to me a great inspiration, and one of the greatest pleasures of that administration was to follow in the footsteps of such a man as the great Jacobi, and to be followed by such a man as the great Dr. Vaughan. (Applause.)—*Jour. A. M. A.*

Synopsis of Proceedings

The 65th annual assembly of the A. M. A. held at Atlantic City, June 22-26, proved an unusually interesting session from every view-

address is published on another page in this issue.

President Vaughan's address, entitled "The Service of Medicine to Civilization," was an eloquent discourse weighted with wisdom and prophetic of accomplishments. It was published in *The Journal A. M. A.*, June 27.

The House of Delegates lost no time in disposing of the business of the Association, but such was the importance of many matters, and so numerous were the problems affecting the welfare of the organization, that the sessions continued from Monday morning until late Thursday afternoon, with only two half-day intermissions. At no time was it possible for the delegates to participate in the work of the scientific sessions. With the view of correcting this undesirable condition, it was proposed that the by-laws be changed so that the House of Delegates shall meet on the Saturday preceding

the date of the annual assembly. This proposition will be voted on in 1915.

The report of the secretary showed a net increase of 3,116 Fellows over 1913, the total fellowship for 1914 being 41,029. (The number of Fellows from Missouri is 1,591.)

The Judicial Council submitted a comprehensive report forcefully drawing attention to the neatness of the laws governing fellowship and the relation between constituent associations and the A. M. A., and asking for more definite laws on these subjects as well as rigid rules for the guidance of the Council. On the subject of advertising in the public press by physicians, the Council finds "that the profession is restive under the flagrant misuse of the public press by certain members of the profession and certain prominent and non-prominent Fellows of the A. M. A. itself." Commending the Council on Health and Public Instruction in spreading knowledge of public health and hygiene through the press, the Judicial Council frankly condemns those physicians who seek in this manner to obtain prominence above their fellows, and suggests that the remedy lies in the county medical society. Quoting from the report we read:

The members of the profession who value the kind of reputation which they may bear before the public and from whom the most accurate information could be obtained, have been forced to see the most garbled statements published as medical facts, or have been refused opportunities to have the truth published unless they were willing to put themselves in the false position of self-exploitation. Certain other members of the profession, however, with a very wide-awake commercial spirit, have quickly seen the means by which they may appear in the press as doing extraordinary things above their fellows, as being the ones to whom all men refer when new discoveries are to be discussed and considered, and have eagerly seized on the opportunity, which the situation has offered, to have their pictures, their honors and their doings put in the public press. They invited reporters to be present at their clinics that these surely may be reported, and have used various other methods that have appealed to their spirit of commercialism that they might increase their passing notoriety and their incomes. While this may not be quackery; it must be acknowledged to be advertising. Certain newspapers have heralded this stepping over the limits of the former strict adherence of the profession to its non-advertising principles as something laudatory and much to be desired. They seemingly fail to understand and to appreciate that if the barriers which the medical profession has held up, and still holds up, are broken down, quackery will become more and more rampant, and although the ease with which the press will obtain the sensations it desires will increase, the accuracy and the truth and the value of the news which they so eagerly seek will soon be ruined.

How the editor of the newspaper may do injury to the reputation and professional standing of a worthy physician whom he was endeavoring to popularize and the evil effect of such misguided attempts is described in these words:

In the smaller communities a physician or surgeon may do some act, perform some operation or bring about the cure of some patient in whom the editor of a local paper is greatly interested. This editor appreciates the value of keeping a person's name before the public, and hoping to give the physician help and assistance in establishing his reputation begins to mention the doctor's daily comings and goings or operations. Before long the doctor is suspected of deliberately trying to advertise himself by means of newspaper write-ups and his reputation as an upright physician suffers, while he himself may be blameless in the whole matter.

The Council has consulted with representatives of several large daily newspapers and met with encouragement that a plan suggested by the Council which seemed fair and just to the press, the public and the medical profession, would be acceptable to the press. This plan was recommended to the House of Delegates in the following resolution, which was unanimously adopted by the House:

Resolved, That it is the sense of the House of Delegates of the American Medical Association that each county society should constitute a publicity committee whose duties shall be to give to the daily press accurate information on all medical matters of interest to the public, that this shall be freely given without the mentioning of names or from whence the information comes, and that this committee shall further act in an advisory capacity to all physicians of its society in questions relating to publications other than in the medical press. Be it further

Resolved, That the secretary of the American Medical Association be instructed to forward this resolution, with the reasons calling it forth, to the secretary of each constituent state association, with the request that it be transmitted to each component society of that constituent association.

The by-laws were amended so as to give the Judicial Council more definite and more extensive powers. The amendment reads:

The judicial power of the Association shall be vested in the Judicial Council, whose decision shall be final. This power shall extend to and include (1) all controversies arising under this Constitution and By-Laws to which the American Medical Association is a party; and (2) controversies (a) between two or more recognized constituent associations, and (b) between the constituent association and the member (or members) of another constituent association (or other associations), or component societies thereof; (c) between members of different constituent associations. In all these cases the Judicial Council shall have original jurisdiction.

Tenure of fellowship was made more restrictive by the adoption of the following amendment:

Fellowship shall be further conditioned on a Fellow conducting himself in accordance with this Constitution and By-Laws, and the Principles of Medical Ethics of this Association.

Another amendment to the by-laws was proposed but laid over until the next annual assembly. In the meantime the proposition will

be sent to all constituent associations for consideration. The proposed amendment reads:

In all cases which arise between a constituent association and one of its component societies; between component societies of the same constituent association; between a member of a constituent association and the component society to which said member belongs; or between members of different component societies of the same constituent association, the Judicial Council of the American Medical Association shall have appellate jurisdiction.

The constituent associations herein referred to are those defined in Article 4 of the Constitution, and the component societies are the county or district medical societies which unite to support and maintain the several constituent associations.

The Judicial Council may, at its discretion, investigate general professional conditions, and all matters pertaining to the relations of physicians to one another and to the public, and shall make such recommendation to the House of Delegates and the constituent associations as it deems necessary.

The recommendation of the Council on Medical Education was adopted urging state licensing boards to make hospital internship compulsory on those who apply for a license to practice medicine; this requirement to apply to all students matriculating on and after Jan. 1, 1915. The House also approved the recommendation that hereafter no rating higher than Class C be granted to any medical college operating as a stock corporation in the interests of the stockholders.

The Board of Trustees received a proposition from one of the Fellows requesting the Association to become the custodian of the patent rights of an instrument which he desired to have patented in order that the instrument may be protected both in regard to the form of the instrument and the standard of material and work in its manufacture. The question was referred to the Judicial Council which recommended that the Association accept the proposition and the following resolution was unanimously adopted:

Resolved. That the Board of Trustees of the American Medical Association shall be permitted to accept, at their discretion, patents for medical and surgical instruments and appliances and to keep these patents, as trustees, for the benefit of the profession and the public; provided, that neither the American Medical Association nor the patentee shall receive remuneration from these patents.

The report of the Board of Trustees is an admirable exhibit of those activities of the Association not delegated to subcommittees. Concerning this report the Reference Committee says:

Your Committee is pleased to commend the faithful and extensive labors of your Board of Trustees as shown in their report.

We regret that the increased expense put on them by the action of this House last year has caused a marked decrease in our surplus, and we hope that there will be a decrease in the number of special committees, etc., this year.

We heartily commend the work of the Council on Pharmacy and Chemistry and believe it has accomplished great good for the profession and our citizens.

No more important work has been undertaken, and none has accomplished more, than that done by the Propaganda Department. We cannot praise its work too highly and recommend its continuance on enlarged lines.

The various publications show an immense amount of labor and gratifying success. We especially note the issuing of the Fourth Edition of the American Medical Directory as a monument of patient investigation, with exceedingly accurate results. It should be in the hands of every physician at all interested in the general profession.

The Cooperative Medical Advertising Bureau fills a great want. It has done much already to raise the standard of the advertisement in state medical journals, and will be the means of securing more and better advertisements for them in the future, at more remunerative terms. We most heartily recommend its continuance.

As to the reserve fund recommended by the Board, there can be no doubt of its business acumen and we recommend that this fund be established as speedily as possible, and to this end we urge the House to be extremely careful concerning unnecessary or extravagant expenditure.

The Council on Health and Public Instruction, with its nine subcommittees, its press bureau, speakers' bureau and medicolegal bureau, performs a service to the profession and to the public not easily comprehended by a mere recital of its activities. The report should be read to be fully appreciated. The Reference Committee's comment on the Council's work and recommendations, which were adopted by the House of Delegates, present in condensed form an idea of the great importance and the wide influence of this Council's activities. The Reference Committee reported as follows:

The report of the Council on Health and Public Instruction has been very carefully considered. Your Committee is impressed with the vast scope of the labors of the Council in extending knowledge among the people concerning health protection, and with the tremendous influence on the public mind already gained and rapidly increasing of convincing the people that the altruistic and philanthropic endeavors of this Association for the improvement of health conditions, both individual and public, and for the elevation of the standards of medical practice, are not tainted with selfishness or ulterior motives. It is not necessary that the Reference Committee do more than emphasize certain portions of the numerous activities undertaken by the Council, as there are no recommendations in the report requiring a vote of the House on adoption or rejection.

The report of the Council suggests that its activities for the coming year be directed along three general lines, namely: (1) a thorough investigation of present health conditions; (2) the education of the public; (3) crystallizing public opinion on the necessity and practicability of conserving human life.

Your Committee strongly indorses the Council's efforts to correlate existing national health organizations in this country, as described in the report, and recommends that the Council continue its endeavors in this direction. This work contemplates surveys of the public health activities of the federal government and of other national governments for purposes of comparison; of state public health activities;

of municipal health activities, and of voluntary national health organizations. It is apparent that our efforts to direct public opinion in the right channel for the conservation of human health and life would thereby be greatly simplified.

The Council has opened a new branch of investigation during the past year, namely, the Medicolegal Bureau, through which information concerning medicolegal questions in all the states may readily be obtained at a common source. It has already prepared a volume containing all the decisions of the supreme courts of this country on medical practice acts; this will be enormously valuable to the medical profession as well as to the legal profession. This book will be issued during the present year.

Among the subcommittees of the Council your Reference Committee desires to commend in the highest terms the work of the Committee on Public Health Among Women. Its influence with the mothers of the country is of incalculable value in the spread of correct ideas for the conservation of child life.

Your Committee would impress on the delegates the importance of the recommendation in the commendable report of the Committee on Defense of Medical Research, namely, that state journal editors scrutinize manuscripts of articles offered for publication with the view of including a statement that anesthesia was employed when in fact that was the case, in order to prevent the circulation of false impressions or misunderstandings by antivivisectionists.

The work of the Committee on Conservation of Vision, appointed in 1913, demonstrates the need of such a division of the Council's activities. The report gives promise, through the splendid results already achieved, that this committee will be very influential in preventing blindness.

The Committee on Revision of the Owen Bill has not been inactive, but could make no progress on account of the many questions before Congress that overshadowed this and other less acute conditions. Your Committee recommends that the House of Delegates reaffirm its endorsement of the principles governing the movement to create a national Department of Health, and commends the Hon. Robert L. Owen for his assiduous championship of such a department.

The Committee on Uniform Regulation of Membership is performing a service in promoting harmonious and uniform methods of organization work that could not otherwise be accomplished, and therefore your Committee recommends that it be continued.

The Committee on Cancer is another recently appointed subcommittee (November, 1913) which has accomplished such excellent results as to justify its creation. While the committee limited its work this year to the issuance of popular articles on cancer, it succeeded in distributing six pamphlets that have been eagerly sought by an increasing number of persons, lay and medical. Your Reference Committee urges all members and Fellows to accord the Committee on Cancer the support and cooperation it asks; such support is essential in this particular field of medical endeavor.

The spontaneous response to the overtures of the Committee to Confer with the National Educational Association to gain the cooperation of the latter body in the cause of public health is a most gratifying and convincing evidence of the far-reaching influence of the work of the Council on Health and Public Instruction; for without the splendid achievements of the Council in the past three years it is certain that the subcommittee could not have presented such weighty arguments favoring the cooperation of these two bodies. Instancing only one feature of this important report, we remind you of the statement by this Committee that the health of country schoolchildren, is far below the standard of city schoolchildren, as shown by surveys, which so shocked and surprised

the members of the National Education Association as to arouse a general desire on their part to improve the conditions of rural school life.

The report of the Committee on Expert Testimony is, we believe, conservative and based on a sound understanding of well-known conditions. The solution of this vexed problem cannot be forced; it must come gradually and with the cooperation of the American Bar Association and the various state bar associations. If the recommendations of the Committee on Expert Testimony are adopted in court procedures, legal contests will be stripped of much of the stigma that now attaches to expert testimony, and especially to medical expert testimony, and lead to further improvement. We recommend that the Council's purpose to issue a draft of a bill for the consideration of state legislatures be endorsed.

In concluding this report, your Reference Committee expresses the conviction that the activities of the Council on Health and Public Instruction are vital to the welfare of the American Medical Association. The work of the Council will either promote a friendly spirit of cooperation on the part of the people or arouse their opposition. Thus far, nothing but a commendable and very gratifying attitude of cordiality on the part of the people has been exhibited toward the Council, and this is due, we believe, to the broad, liberal and judicious manner adopted by the Council in approaching the problems that confront it. No radical departure from this course should be permitted.

In order that the work of the Council on Health and Public Instruction and of its various subcommittees may meet the unanimous support of the constituent state associations, your Reference Committee reaffirms the recommendation of the Reference Committee of 1913, namely:

"That the Council in developing its activities . . . shall work through the constituent state associations and their committees rather than by the creation of new or special committees; and that all committees and persons representing any department of the American Medical Association or representing any of its activities within the borders of any constituent state association shall be appointed by the executive officers of the state association; and such committees shall be under the jurisdiction and control of the state association and responsible to the Council on Health and Public Instruction through the state association.

"That no committee shall be appointed by the sections or by any subcommittee with duties extending into the territory of any constituent state association. That all such committees shall be appointed by the constituent state association and be under the jurisdiction and control of the state association."

Three resolutions on the question of medical expert testimony were referred to your Committee, namely, one by Dr. J. J. McGovern, delegate from Wisconsin; one from the Section on Ophthalmology, and one containing a copy of a suggested bill on medical expert testimony in Pennsylvania.

Your Committee has given these resolutions very careful consideration. The Committee thoroughly appreciates the present unsatisfactory conditions surrounding expert testimony. The simultaneous appearance of so many suggestions from Fellows and branches of the Association emphasizes the great necessity for clarifying this question at as early a time as possible and is an evidence that the members and Fellows have an abiding faith in the efficiency of the organization to solve questions that affect the practice of medicine in all its phases. Your Committee believes, however, that the Council on Health and Public Instruction is in position to bring about a solution to this question more speedily and more satisfactorily than can be done by the duplication of

committees working along similar lines. Your Committee recommends that the resolutions be referred to the Council on Health and Public Instruction.

The reward of the gold medal for the best scientific exhibit was won by Miss Maud Slye, of the Otho S. A. Sprague Memorial Institute of Chicago, for her exhibit on charts, diagrams, specimens and tables on the transmission of hereditary cancer and other diseases in mice.

The material presented in the section on surgery was, on the whole, rather commonplace. Abdominal surgery had been transferred to the section on obstetrics and gynecology at the meeting in Minneapolis last year, which took away most of the interesting papers. The mistake, however, was corrected by the House of Delegates at this meeting.

While some of the contributions were of undoubted merit, nothing was extraordinary or spectacular. Rather startling, however, was the paper of Mr. Frank D. Gilbreth, read at the session on Thursday afternoon. This celebrated architect presented a splendidly written essay under the title "Motion Study Standardization." From the standpoint of an "efficiency engineer" he told of his observations in a number of surgical clinics and operating rooms. He showed himself to be thoroughly familiar with manual processes and motions. His learned exposition, though it may be somewhat more theoretical than practical, will certainly lead to the elimination of certain unnecessary movements during surgical procedures. The rapidity of the individual motion in no way contributes as much toward shortening the time of an operation as does the omission of useless movements and actions. We do waste a lot of time which might be saved to the benefit of the patient and to the advantage of the surgeon. The attendance at each session was light.

The officers elected for the ensuing year are: president-elect, William L. Rodman, Philadelphia; first vice-president, D. S. Fairchild, Des Moines, Ia.; second vice-president, Wisner R. Townsend, New York; third vice-president, Alice Hamilton, Chicago; fourth vice-president, William E. Darnall, Atlantic City; secretary, Alexander R. Craig, Chicago; trustees, Philip Marvel, Atlantic City; Philip Mills Jones, San Francisco; W. T. Sarles, Sparta, Wis.; treasurer, Wm. A. Pusey, Chicago.

San Francisco was chosen for the 1915 assembly.

The attendance was considerably larger than at any previous session at Atlantic City; the total registration being 3,958. All the delegates from Missouri were present and attended all the sessions of the House with the exception of Dr. A. W. McAlester, Jr., who was prevented from leaving home on account of illness in his family. His place was filled by Franklin E. Murphy of Kansas City.

This is but a résumé of some of the important work of the House of Delegates. A reading of the full account of the proceedings in *The Journal A. M. A.*, July 4, will repay every member who desires to inform himself with the splendid achievements of the American Medical Association.

SOCIETY PROCEEDINGS

ROLLA DISTRICT MEDICAL SOCIETY

The Rolla District Medical Society held its semi-annual meeting at Salem, June 11, at 8 p. m., the president, Dr. R. E. Breuer of Newburg in the chair. In the absence of the secretary Dr. E. J. Goodwin of St. Louis was elected secretary pro tem.

The following were present: Dr. R. E. Breuer, Newburg; Dr. George Reeves, Steelville; Drs. W. E. Rudd, J. C. Welch, A. T. McMurtry, T. G. Hunt, of Salem, and the following visitors: Drs. Charles A. Leavy and E. J. Goodwin of St. Louis.

Dr. Reeves presented a patient with suspected tuberculosis for members to examine and diagnose.

Dr. Charles A. Leavy read a paper on "Sarcoma" and reported a case operated and later treated with Coley's fluid, which had progressed to a stage that indicated a cure.

Discussion by Drs. Welch, Hunt, Rudd, McMurtry; Dr. Leavy closing.

Dr. Welch related some of the results of his experience of a case of cancer treated by radium by Dr. Howard Kelly of Baltimore. Dr. Welch said the cost of taking the treatment is so great as to practically prohibit its use in most cases.

Dr. Rudd exhibited a specimen of gallstone of unusual size and shape taken from a patient some years ago, and stated that the patient had been free from trouble since the operation.

Dr. McMurtry described several cases and discussed the subject of gallstone disease. A general discussion of this subject followed.

The discussion of the case presented by Dr. Reeves was then taken up and the consensus of opinion favored the diagnosis of tuberculosis.

At 12 o'clock the members adjourned to the Commercial Hotel where luncheon was served. After luncheon Dr. Goodwin spoke on the work of the State Medical Association and the organized profession generally, emphasizing the necessity of cooperation of the County Societies for the benefit and protection of the physicians and the improvement of public health. A general discussion of the objects and purposes of organized medicine followed.

At 3 o'clock a. m. the Society adjourned.

E. J. GOODWIN, M.D., *Secretary pro tem.*

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met at the County Court House, in Butler, on their regular meeting day, May 28. Meeting called to order by the president, Dr. Boulware. The following members and visitors were present: Drs. Boulware, Chastain, Lockwood, Crabtree, Newlon, Lusk, of Butler; Dr. Fletcher of Spruce; Drs. W. A. Williams, J. H. Williams and Botts of Hume; Dr. Maxey of Johnstown; Drs. Tuttle, Robinson and Bates of Adrian.

Dr. Howard Hill, Dr. C. C. Conover and Dr. James B. Henderson of Kansas City, had previously accepted invitations to address our society, Drs. Hill and Henderson were present but Dr. Conover was unable to attend.

Dr. Henderson presented an earnest and efficient address on Tubercular Infected Kidneys, which was very much appreciated by the physicians present.

Discussions by Drs. Hill, Lockwood, Williams, Robinson, Crabtree and Tuttle, Dr. Henderson closing.

Dr. Hill gave a fifty-minute talk on preparation and postoperative care of patients, which a very short time ago would have been considered revolutionary, especially that part referring to diet and catharsis; the teaching then was no cathartics before operation and a free diet after, when possible. He also spoke of the beneficial effect of pituitary extract in post-operative stomach dilatation, making the use of the stomach tube rarely necessary.

Discussions by Drs. Chastain, Lockwood, Newlon, Bates and Henderson; Dr. Hill closing.

The remarks of Drs. Hill and Henderson were well received, considered practical and sound, and we hope they will visit our meetings again.

The next two hours were given to clinics, patients being presented by different physicians. Dr. S. N. Maxey of Johnstown presented two cases. (1) Male, with an affection of the lip of five years' duration; complained at intervals of burning and pain of lip; probably some form of trifacial neuralgia. (2) Case of swollen ankle. Treated past two years for synovitis. Fluoroscope used, did not show much, but probably tubercular.

Dr. Robinson of Adrian presented two cases. (1) Hematuria periodically for several months. Fully discussed, but no final diagnosis made. (2) Congenital spinal curvature. Complaint, sciatica; due, it was decided, to pressure around the sciatic notch. Decided to build up the leg on that side.

Dr. J. H. Williams of Hume presented two cases. (1) Hydrocele; operation advised. (2) Postoperative pain following gall-stone operation. Agreed it was due to constipation and anemia to absorption of intestinal toxins.

We are endeavoring to maintain a free clinic monthly for the benefit of members presenting cases.

On motion, adjournment to June 25.

A. E. LYLE, M.D., *Secretary*.

CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society held its June meeting at the Palace Hotel, Fulton, June 11, 1914. There were present Drs. Major, Christian, Crews, Hirsch, Hill, Evans, Williamson and Yates; also as visitors, Dr. A. W. McAlester, Columbia, and Dr. A. R. McComas, Sturgeon.

Dr. McComas, member of the Judicial Council for this District, gave the Society an interesting address on matters pertaining to medical legislation and on the work of the committee on health and public instruction.

Dr. Major reported a case of cancer of the cervix uteri and presented a specimen.

Dr. Williamson read a paper on "Rheumatism," which was followed by a general discussion of the subject.

Dr. Christian read a paper on "Typhoid Fever, Its Prevention and Treatment," emphasizing especially the treatment by typhoid vaccine and the use of vaccine as a preventive.

Dr. McAlester gave an interesting and instructive discussion of the subject. The Society generally participated in the discussion.

Dr. Crews presented an interesting clinic of rather unusual skin lesions in a case of marked atheromatous degeneration of the arteries.

The Society especially enjoyed the visit of Drs. McAlester and McComas. The social feature of the meeting added much to the pleasure of the occasion.

On invitation we will hold the July meeting at Mokane.

M. YATES, M.D., *Secretary*.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, June 11, at 2 p. m. The meeting was called to order by Vice-President Dr. M. P. Overholser with the following members present: Drs. H. S. Crawford, A. R. Elder, M. P. Overholser and J. S. Triplett. On account of a heavy storm in the forenoon the out-of-town doctors did not attend, and those who were to take part in the program were absent, so the same program was continued until the next meeting.

After a free discussion of miscellaneous matters the meeting adjourned.

H. S. CRAWFORD, M.D., *Secretary*.

HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met June 5, 1914, at 2 p. m., with President T. J. Payne in the chair. Members present: Drs. Dinwiddie, Temple, Pritchett, Kitchen, Wright, Lewis, Lee, McGee, Benham, Champion, Richards, Moore and Watts. The minutes of the May meeting were read and approved.

Clinical cases were reported and discussed. Dr. Moore gave us the differential diagnosis of enlarged prostate and vesical stone.

Dr. M. N. Smith not being present to read his paper on adenoids, it was continued to the July meeting and Drs. Kitchen and Temple were appointed to prepare and give results of their experience in appendicitis and tonsillitis.

Dr. Pritchett, alternate delegate to the meeting of the Missouri State Medical Association at Joplin, made a report and announced that Dr. H. C. Shuttee was elected president and that the meeting for 1915 would be held at St. Joseph.

Our Society enjoyed two hours in discussion, and adjourned to meet Friday, July 3, at 2 p. m.

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

JOHNSON COUNTY MEDICAL SOCIETY

The Johnson County Medical Society met in regular session with the president, Dr. Henry Park of Knobnoster, presiding.

The paper of the day was read by Dr. H. F. Parker of Warrensburg on the subject of "Treatment of Infections and Infectious Diseases, with Special Reference to Vaccine and Serum Therapy." The paper was one of merit and elicited an interesting discussion. It seemed to be the unanimous opinion that this newer method of treating diseases of bacterial origin is strictly in harmony with progressive medicine and that sooner or later the modern therapist would go about his daily duties with a grip full of vaccines and serums amply prepared to fight great battles with the germ life which haunts our existence.

Our Society is much interested in public education, believing this method to be very important in our efforts to solve the problems of quackery, municipal hygiene, lessening infant mortality and the prevention of disease. With these ideals in view we are to arrange for two public meetings during the remainder of this year.

We hope to take an active part in the "Johnson County Round-Up," which will be held sometime this fall, and through our efforts make it possible for a "Baby Contest" which should be instrumental in assisting mothers in the care and safety of their offspring. We have advocated a "Baby Contest" in each of the townships as a preliminary measure to secure at the county "Round-Up" the very best scored babies only.

The matters relative to the exposition of the business methods of charlatans in Chicago, as related in the little booklet which was published for the infor-

mation of editors and newspaper men, was taken up and discussed, and in view of the fact that our editors in Johnson County are ethical and above reproach in this particular, and as we deemed it a matter which should be dealt with from sources of authority, a motion prevailed to refer the matter to the State Legislative Committee in the hope that such legislation might be enacted which would give the State Board of Health the power to revoke the license of such men for practicing this commercialism within the borders of the state.

In the smaller towns and cities it seems possible for the local societies to wield such an influence that the editors of small daily papers and county publications would refrain from accepting advertising matter which would be harmful to the community in which these papers are circulated.

In view of this and other equally well-understood reasons, it becomes the duty of every County Society to become a recognized factor in the social economic and business interests of its jurisdiction.

O. B. HALL, M.D., *Secretary*.

KNOX COUNTY MEDICAL SOCIETY

The meeting was called to order by the president, Dr. Geo. S. Brown. The following members were present: Drs. J. R. Northcott, J. W. Haden, Ben Humphrey, A. D. Gray, H. H. St. John, James Keaney, G. S. Brown and H. J. Jurgens. Drs. Henry Humphrey of Brashear and T. A. Campbell of Edina were welcome visitors.

The president introduced Dr. J. G. Shawgo of Quincy, Ill., who gave a beautiful demonstration of the possibilities of the *x*-ray in the diagnosis of intra-abdominal abnormalities. His address was very much appreciated and freely discussed.

Dr. H. J. Jurgens of Edina read a paper on "Fractures of the Skull."

It was moved and seconded that a vote of thanks be extended to Drs. Shawgo and Jurgens for the papers they read.

Adjourned to meet at Novelty on the first Monday of July.

H. J. JURGENS, M.D., *Secretary*.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at Aurora, June 2, 1914.

The Society was called to order at 10 a. m. by the president, Dr. H. L. Kerr. The following answered to roll call: Drs. Kerr, Smart, Adams, Stevenson, Moore, Miller, Robertson, Baird, Shelton, Fulton, Loveland, Rodman, Stone, Lowe and Carter. Drs. T. O. Klingner and G. B. Dorrell of Springfield and Dr. Orr of Washington were visitors and were made honorary members of the Society. The following program was rendered:

"Talipes," by Dr. J. P. Baird, Marionville.

"The Resection of Cartilaginous and Bony Deflections of the Nasal Septum," by Dr. T. O. Klingner, Springfield.

"A Plea for the Country Doctor," by Dr. W. I. Fulton, Mt. Vernon.

"Factors entering into the Mortality of Acute Intestinal Obstruction," by Dr. H. A. Lowe, Springfield.

"History of Cases," by Dr. T. D. Miller, Aurora.

The Society adjourned to meet at Aurora, Sept. 1, 1914.

R. C. ROBERTSON, M.D., *Secretary*.

MACON COUNTY MEDICAL SOCIETY

Another big clinic was held at Macon by our Society on May 7. It was an orthopedic clinic. Dr. Nathaniel Allison of St. Louis demonstrated the cases. We had

an abundance of interesting clinical material on hand to keep him busy from 9:30 a. m. to 5 p. m. Thirty-five physicians were present.

Dr. Allison showed the importance of careful and thorough methods in handling this class of patients, the necessity of systematic treatment and of the possession of an adequate knowledge of the methods and devices for applying corrective measures for the relief of orthopedic cases. He exhibited numerous microscopic slides, *x*-ray pictures and photographs during the clinic. Dr. Allison did us much good. The clinic was greatly appreciated and we hope he may honor us again some day.

The following were present: Drs. E. B. Clements, Ed. S. Smith, W. H. Miller, C. W. Reagan, L. M. Thompson and A. B. Miller of Macon; Drs. C. B. Clapp, E. W. Schroeder, R. D. Streeter and Dr. Curry of Moberly; Drs. George F. Brewington, W. P. Rowland, L. O. Mason and T. P. Gronoway of Bevier; Drs. F. W. Allen and Wm. A. Welch of Callao; Drs. B. E. Moody, Frank Roy, Ellis Roy, S. M. Hall, C. A. Williams, Wm. M. Bayliss and James R. Daniel of Clarence; Drs. G. C. Lyda and A. L. Cambrie of Atlanta; Drs. W. D. Pipkin and Jno. A. Hyatt of Excello; Dr. S. T. Ragan of Ardmore; Dr. Jno. Allen of Cairo; Dr. L. O. Nickell of Maude; Dr. C. E. Salyea of Shelbyville; Dr. P. L. Patrick of New Cambria and Dr. Z. T. Standley of Laclede, and Drs. Howard and Haley.

A. B. MILLER, M.D., *Secretary*.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its regular meeting at Eolia August 3, the guest of Dr. Edgell. The program for the meeting consisted of papers by Drs. J. E. Bankhead, D. M. Pearson, C. L. Bankhead, E. M. Bartlett and O. K. Edgell.

A full report of the meeting will appear in the next issue.

SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session at the Court House in Marshall, June 9, at 2:30 p. m. The president being absent Vice-President A. E. Gore called the meeting to order. The minutes of the preceding meeting were read and approved following a correction in date by Dr. Manning.

Dr. William Harrison reported for the Committee on "Better Babies Conference," and was requested to appoint examiners, which he did, appointing members of the society.

Dr. J. E. Connell reported three cases of typhoid, complicating the puerperium. A general discussion followed.

Dr. John R. Hall, Napton, reported for the by-laws committee, asking for more time, which was granted.

Dr. M. S. McGuire, Arrow Rock, was asked to present a paper on "Summer Diarrhea in Children," to be read at the next meeting.

Adjourned to meet July 14, 1914. Gentlemen, do not neglect your attendance record this summer.

G. A. AIKEN, M.D., *Secretary*.

SCHUYLER COUNTY MEDICAL SOCIETY

The Schuyler County Medical Society met in regular session at the office of Dr. W. F. Justice, Lancaster, at 2 p. m., June 30.

Members present: Drs. W. F. Justice, B. B. Potter, W. A. Potter, H. E. Gerwig, A. J. Drake and J. B. Bridges. The meeting was called to order by Dr. W. A. Potter, vice-president. The minutes of the meeting of May 21 were read and approved.

There being no regular program, the time was occupied in reporting and discussing some interesting cases, and making arrangements for the public meeting which will be held in connection with the Fifth District Medical Society and the Schuyler County Medical Society early in September, the date to suit the convenience of the speaker for the public meeting. A committee of four: Drs. B. B. Potter, W. H. Zieber, A. J. Drake and J. H. Keller, was appointed to make arrangements for this meeting by procuring a suitable hall and preparing a banquet for the doctors and their wives.

The secretary was instructed to correspond with the state secretary and procure the services of a speaker.
J. B. BRIDGES, M.D., *Secretary*.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at their rooms Wednesday evening, June 3. Twenty-one members were present, Dr. F. H. Ladd in the chair.

For the purpose of ascertaining the legal right of this Society to proceed against quack and advertising concerns, Dr. Ladd was instructed to obtain a written opinion from Judge Randolph.

The application of Dr. Julius Kangisser for membership in this Society received its first reading and was referred to the board of censors for their investigation.

The program committee, through Dr. C. W. Fassett, reported a probable paper from Dr. Ryan of Des Moines at our next meeting which was expected to be in the nature of a lunch at the Elks Club Rooms.

Dr. F. H. Ladd reported a case of "Bovine Tuberculosis."

The courtesy of the floor was extended to Dr. Rodgers, dean of the St. Joseph Veterinary College, who entertained the meeting with a few remarks. The paper of Dr. Chas. Geiger on "Treatment of Acute and Chronic Osteitis and Osteomyelitis; Electric Instruments are Indispensable," was read, and discussed by the following members: Drs. Caryl Potter, F. H. Ladd, T. J. Lynch.

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

VERNON COUNTY MEDICAL SOCIETY

The Vernon County Medical Society met in regular session at Nevada, June 11. The session was held at the "Vernon Sanitarium" and the morning hours were spent in the examination of numerous clinics and hearing the discussions and lectures pertaining thereto. Dr. H. E. Pearse held a gynecological clinic which was very much appreciated. Dr. Unterberg examined many cases of diseases of the nervous system and applied numerous tests pertaining to these diseases. Dr. Neal held a clinic on surgical cases and Dr. Conover gave demonstrations on medical and surgical diagnosis, especially of the heart and lungs. When the noon hour arrived the society and all present were invited to partake of a carefully prepared lunch which proved to be a banquet furnished by Drs. Yater and Williams of the Vernon Sanitarium, after which the noon hour, or what remained of it, was spent out on the grassy lawn in the cool breeze, every fellow with a fine Havana cigar in his mouth, puffing away and telling jokes and stories and playing pranks. Truly this was an outing which all enjoyed, especially our Kansas City visitors.

At 2 p. m. the Society was called to order by Dr. E. Dulin, the president. The minutes of the last meeting were read by Dr. J. T. Hornbeck, the secretary, and approved by the Society.

Dr. Conover then read a carefully prepared paper on "Acute Hematogenous Infections of the Kidney." This

paper was simply fine and accompanied by stereopticon slides of the pathological conditions. This paper was followed by one from Dr. H. E. Pearse, the title of which, "Cause, Diagnosis and Treatment of Pyelitis," fitted in admirably with the paper of Dr. Conover. Dr. Pearse's paper was practical and up-to-date. Dr. Unterberg then read his paper on "Some Remarks on Obscure Disturbances of the Lower Genito-Urinary Tract," With Particular Reference to Syphilis of the Nervous System as an Etiological Factor." The doctor convinced his audience that he is fully conversant with his subject and his paper was received with much appreciation.

Dr. Dawson made a verbal report concerning the use of crotalin in epilepsy as used in the State Hospital No. 3. The doctor was unable to make a final report and asked further time. He thought it acted favorably in some cases but not in others. Dr. Neal read a paper on "Uterine Conditions and Their Treatment."

The subject of small-pox was discussed. We have no small-pox here and the disease does not interest us very much at the present time.

All the papers were freely discussed by the members and the discussion was very interesting. Drs. J. Park Neal, C. C. Conover, H. E. Pearse and H. Unterberg were elected honorary members of the Society and extended a most cordial vote of thanks by the Society for their gracious presence. Those present from Nevada and county were, Drs. Bohannon, Robinson, Hornback, Dulin, Yater, Callaway, Ammerman and Brown. Also Drs. Dawson of the State Hospital, Davis of Walker, Walker of Harwood, and Keithley of Milo.

Those from a distance were Drs. Pearse, Conover and Neal of Kansas City, Unterberg of St. Louis and Talbot of Appleton City. Dr. Pearse gave a popular lecture at 9 a. m. at the High School before the county teachers and at night at the Airdrome, where he was introduced by Dr. E. A. Dulin, the president of the Society. The Society extended a vote of thanks to Drs. Yater and Williams for the magnificent banquet and entertainment.

J. T. HORNBACK, M.D., *Secretary*.

WEBSTER COUNTY MEDICAL SOCIETY

The Webster County Medical Society held its quarterly meeting at Belle Springs on the James River, June 17, 1914.

Meeting called to order by Dr. J. W. Good, president. Drs. Bailey, Wells, Rabenau, Good and Bruce answered to the roll call. Drs. Beattie, Dewey, Roseberry and McHaffie of the Greene County Medical Society were also present, as were Drs. Warden, Roberts and Shroat of Marshfield, who were guests of the Society.

Dinner was served by the ladies present, including Mesdames Bailey, Roberts, Good, Rabenau, Shroat, Wells, Warden and Bruce, covers being laid for thirty. Among the younger ones present were Emmiline Bailey, Robert and Donald Bruce, Roy Warden, Master Roseberry and little Miss Wells. After all had partaken of a bountiful dinner of all the good things to eat, our meeting was then resumed and reports read and accepted.

Dr. Beattie reported a case of typhoid fever following confinement, with recovery, which was discussed as to treatment. Dr. Beattie used iodized emulsion with good success in this case and said also he had had good success with same in the vomiting of pregnancy.

Dr. McHaffie read a very interesting paper on "Preventive Medicine," which was discussed by Drs. Dewey and Roseberry.

Application of Dr. L. G. Shroat of Marshfield was read and referred to the Board of Censors, who

reported favorably, and he was then elected a member of this Society.

A vote of thanks was extended to the visiting doctors and ladies present with an invitation to come again.

It was voted to hold our next meeting in Marshfield, in September.

Adjourned at 2:30 p. m. and then sports and usual pastimes were indulged in until time to return to our homes. All had a fine time.

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

WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society met at Norwood, May 7, with most of the members in attendance. Dr. R. M. Rogers of Mansfield, president, in the chair.

Dr. D. W. McGee of Mountain Grove read a paper on "Puerperal Eclampsia," which was discussed by all in attendance, as was also the subject of "Puerperal Infection," on which a paper was to have been read by Dr. H. W. Daugherty of Mountain Grove. He was unable to be present.

A vote was taken to invite the doctors of Douglas County to meet with the Society at Hartville at the next meeting, which will be held August 6.

E. J. BUTZKE, M.D., *Secretary*.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, 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":

ARLCO-UREASE.—A standardized preparation of the ureolytic enzyme obtained from the soy bean. It decomposes urea into ammonia and carbon dioxide and is used in the estimation of urea in urine, blood and other body fluids. The ferment is added to a measured amount of urine and, after a time, the amount of ammonia formed is determined. Arlington Chemical Co., Yonkers, N. Y. (*Jour. A. M. A.*, July 11, 1914, p. 165).

UREASE-DUNNING.—A highly potent and standardized preparation of the ureolytic enzyme obtained from the soy bean. It decomposes urea into ammonia and carbon dioxide. It is used for the determination of urea in urine, the amount of ammonium carbonate formed from the ammonia and carbon dioxide produced is determined by titration with volumetric acid. Urease-Dunning is supplied only in the form of Urease-Dunning Tablets, containing 0.025 Gm. Hynson, Westcott & Co., Baltimore, Md. (*Jour. A. M. A.*, July 11, 1914, p. 165.)

ELECTRARGOL FOR INJECTION.—Ampules containing 10 Cc. electrargol in the non-isotonized condition. Comar & Co., Paris, France (*Jour. A. M. A.*, July 11, 1914, p. 165).

STYPTICK APPLICATORS, ALUM 75 PER CENT.—Sticks tipped with a mixture of alum 75 per cent. and potassium nitrate 25 per cent. Admitted to the Appendix to New and Nonofficial Remedies. Antiseptic Supply Company, New York. (*Jour. A. M. A.*, July 11, 1914, p. 165).

PROPAGANDA FOR REFORM

ROBINOL.—Robinol is a glycerophosphate mixture exploited by John Wyeth & Brother on the discarded theory that certain diseases are due to a loss of phosphorus from the body and that this phosphorus deficiency is best remedied by administration of glycerophosphates. There is no evidence that glycerophosphates when administered act differently than do inorganic phosphorus compounds. At all events, if phosphorus deficiency really occurs, it would be more rational to supply the needed phosphorus in the form of foods rich in phosphorus, such as milk and eggs (*Jour. A. M. A.*, July 4, 1914, p. 49).

SEVETOL.—There was a time when physiologists thought that fats were absorbed into the blood in the form of a fine emulsion. It is now known that fat enters the blood after having been split into glycerol and fatty acids, the latter being, to a large extent, combined with alkalis in the form of soaps. Making use of the discarded theory, Sevetol, put out by John Wyeth & Brother, is presented to the profession with the claim that it is a very fine emulsion of fat and because of this is readily absorbed. While Wyeth & Brother would have physicians believe that Sevetol is readily absorbed and digested, it is evident that the amount of Sevetol which can be taken is limited not only by the power of assimilation, but also by the power of digestion (*Jour. A. M. A.*, July 4, 1914, p. 49).

TOOTH DETERGENTS.—While many tooth preparations are alkaline from the soap which they contain, it is probable that weakly acid preparations are to be preferred. As the antiseptics in tooth powders and washes do not remain in the oral cavity for any length of time, they cannot exert any beneficial antiseptic action. Antiseptics may even be harmful in that their periodical application may render the organisms which infect the mouth more hardy and vigorous (*Jour. A. M. A.*, July 4, 1914, p. 50).

DR. JIROCH COMPANY, A FRAUDULENT CONCERN.—The federal authorities have declared the Dr. Jiroch Company, 533 S. Wabash Ave., Chicago, fraudulent and denied it the use of the mails. This medical mail-order concern sent out a treatment which appears to have been the same no matter what the symptoms reported by the victim. Examination of the four kinds of tablets sent out, in the A. M. A. Chemical Laboratory, showed these to contain ordinary tonic and laxative drugs (*Jour. A. M. A.*, July 11, 1914, p. 179).

LITHIUM SALTS IN URIC ACID DIATHESIS.—There is no reliable clinical evidence that Lithium salts increase the excretion of uric acid by the kidneys, except as they exert a diuretic action. Experimental work has failed to show that lithium salts or the alkalis cause the absorption of deposited urates, gouty tophi, etc. The popular belief as to the action of lithia is founded on a misrepresentation of chemical facts. There is no reason why lithium salts should be expected to favor the solution of uric acid or urates in the tissues, the blood-serum or the urine (*Jour. A. M. A.*, July 11, 1914, p. 184).

WINE OF CARDUI.—While the Chattanooga Medicine Company asserts that in the manufacture of Wine of Cardui no more alcohol is used than is necessary to preserve it, experiments indicated that the preparation contains only water-soluble constituents and that a

non-alcoholic preparation might easily be prepared. Also, despite the owner's assertion that Wine of Cardui cannot be used as a tippie, large doses were taken experimentally with no observable effects other than those of alcohol; further, letters from physicians assert that the preparation is used habitually, evidently for its alcohol effects—probably unconsciously. The exploitation of Wine of Cardui is vicious and the public should be apprised of the facts (*Jour. A. M. A.*, July 18, 1914, p. 258).

STRYCHNIN AND CAFFEIN IN CARDIOVASCULAR DISTURBANCES.—Aided by a grant from the Council on Pharmacy and Chemistry, Dr. L. H. Newburgh has made a painstaking study of the action of strychnin and caffen on cardiovascular disturbances. He concludes that, since the blood-pressure is not low either in persons showing grave symptoms of pneumonia or of those dying from that disease, and since it has been proved that the vasomotor arcs are normal in animals after death from pneumonia, it is logical to conclude that the vasomotor mechanism is not impaired in pneumonia. Strychnin does not improve or augment of the work of the heart in persons suffering from broken cardiac compensation. It could not be shown that either strychnin or caffen stimulated the cardiovascular apparatus in any of the conditions studied (*Jour. A. M. A.*, July 25, 1914, p. 311).

SODIUM FLUORIDE.—While the poisonous character of fluorides is recognized, the use of sodium fluoride as a food preservative is still considered. As a result of experiments, F. Schwyzer concludes that fluorine preparations are poisonous even when administered in very small doses (*Jour. A. M. A.*, July 25, 1914, p. 323).

VACCINE AND SERUM IN HAY-FEVER.—A serum for the treatment of hay-fever is described in New and Nonofficial Remedies. Theoretically there can be no vaccine treatment of this disease for the reason that it is produced, not by bacteria, but by the pollen of various plants. The use of vaccines derived from the micro-organisms found in the nasal secretion are still in the experimental stage (*Jour. A. M. A.*, July 25, 1914, p. 340).

BOOK REVIEWS

THE HYPODERMIC SYRINGE. By George L. Servoss, M.D., Editor of Nevada Medicine. Member of the Nevada State Medical Association. Fellow of the American Medical Association. 317 pages. Cloth. Price \$2.00. Physicians Drug News Co., Publishers, Newark, N. J.

Prefaced by a brief historical account of the hypodermic method of medication, this little volume is a condensed narrative of the hypodermic syringe and its possibilities, as set forth by numerous authors and investigators.

GENITO-URINARY DIAGNOSIS AND THERAPY, FOR UROLOGISTS AND GENERAL PRACTITIONERS. By Dr. Earnst Portner, Specialist for Urology, Berlin, Germany. Translated and edited by Bransford Lewis, M.D., B.Sc. Professor of Genito-Urinary Surgery, Medical Department St. Louis University, St. Louis, etc. 221 pages. Illustrated. C. V. Mosby Co., St. Louis, 1913. Price, \$2.50.

For the benefit of the practitioner who intends to engage in the treatment of urinary diseases, the vol-

ume is a concise presentation of the important features of the therapy followed in such cases. General practitioners will find the book a decided help.

THE PRINCIPLES AND PRACTICE OF MEDICAL HYDROLOGY BEING THE SCIENCE OF TREATMENT BY WATERS AND BATHS. By R. Fortescue Fox, M.D. (Lond.), F.R. Met. Soc. 295 pages. Oxford University Press, American Branch, 35 West Thirty-Second St., New York, 1913. Price, \$2.00.

"It is the object of the present work to put forth in a systematic and compendious form the medical doctrine of waters and of baths." The volume is divided into four parts, comprising twenty-two chapters: Part I: Physiology of Bathing; Part II: Hydrotherapy; Part III: Medicinal Springs and Baths; Part IV: Instructions for Hydrological Treatment.

SKIN DISEASES IN GENERAL PRACTICE. THEIR RECOGNITION AND TREATMENT. By Haldin Davis, M.B., B.Ch., B.A. Oxon, F.R.C.S. Eng., M.K.C.P., etc. 340 pages. Oxford University Press, American Branch, 35 West Thirty-Second St., New York, 1913. Price, \$3.75.

A thoroughly practical work. The classification is founded on the topographical distribution of skin diseases, probably the first English text possessing this advantage, as well as on the etiology and this unique feature lends a rare aid to correct diagnosis. The disadvantages arising from this arrangement are met by subscribing three chapters to those skin diseases that may affect any or every area.

Dermatology is more or less mysterious to the average general practitioner who finds little opportunity to acquaint himself with these mysteries. Consequently a volume like the one before us will be hailed as a great boon by the general physician.

PRACTICAL SANITATION. A Handbook for Health Officers and Practitioners of Medicine. By Fletcher Gardner, M.D., and James Parsons Simonds, B.A., M.D. Illustrated. St. Louis. C. V. Mosby Co. 1914. Price, \$4.00.

This book is intended as a guide for health officers and practitioners of medicine. A novel feature is the grouping of different diseases that need to be quarantined. The chapters on examination of schools, the duties of the health officer, and the management of campaigns for the extermination of rats, flies, mosquitoes, bedbugs and other vermin are well written. The short chapter on factories and workshops is well done but could with advantage be enlarged as could the chapter on institutions and prisons. Registration of births is fully covered as is the prevention of soil pollution. The chapter on pathological materials is exceedingly well done. The book should be valuable to county health officers and physicians.

DEFECTIVE OCULAR MOVEMENTS AND THEIR DIAGNOSIS. By E. and M. Landolt, Paris, translated by Alford Roemmele, M.B., Ch.B., and Elmore W. Brewerton, F.R.C.S. Oxford University Press, American Branch, 35 West Thirty-Second St., New York. Price \$2.00.

An interesting little volume in which the author endeavors to group the essential facts for knowledge of oculomotor affections, especially those which the general practitioner is apt to overlook.

Oculomotor affections are classified under four headings: Concomitant strabismus; paralytic strabismus; anomalies of the associated movements and paradoxical motor lesions. The symptoms of paralysis are discussed and classified with particular care and precision.

The student and practitioner will find this little volume of wonderful assistance as a guide over the oculomotor system.

MEDICAL AND SURGICAL REPORTS OF THE EPISCOPAL HOSPITAL IN PHILADELPHIA. Vol. II, 1914. By William J. Doran, Philadelphia.

The latest report of this important Hospital contains, besides the statistical reports, forty-three papers covering a wide range of subjects based on the work done in the hospital for 1913. The first of these papers is in a reminiscent vein concerning the hospital for the quarter century, 1888 to 1912. The volume has nearly 450 pages with many good illustrations and reflects great credit on the member of the staff who edited it.

MATERIA MEDICA, PHARMACOLOGY, THERAPEUTICS AND PRESCRIPTION WRITING. For Students and Practitioners. By Walter A. Bastedo, Ph.G., M.D. Associate in Pharmacology and Therapeutics at Columbia University. Octavo of 602 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$3.50 net.

In this volume the author lays special emphasis on the importance of both laboratory and clinical research. Research has thrown so much light on physiology and therapeutics that many drugs are now given a new valuation, and treatment has received a new potency.

The book is an adaptation of lectures delivered at Columbia University and the author has for the sake of practicability, laid most stress on those things that bear on practice, to the exclusion of things of greater interest in pharmacology.

The book is a valuable addition to the subject and should be found in the library of every practitioner.

A MANUAL OF CLINICAL DIAGNOSIS BY MEANS OF LABORATORY METHODS. For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D., Professor of Clinical Pathology and Experimental Medicine in the College of Physicians and Surgeons, Baltimore. Eighth edition, enlarged and thoroughly revised. Octavo, 809 pages, with 185 engravings and 25 plates. Cloth, \$5.00 net. Lea & Febiger, Philadelphia and New York, 1914.

The eighth edition has been enlarged and thoroughly revised. The first part of the volume is devoted to technical questions, and the second part of book deals with the application of laboratory findings to diagnosis. The importance of applying laboratory findings to concrete cases is emphasized and the volume laid out with this rule in mind.

Much of the technic in connection with Wassermann reaction has been rewritten and the technic of the complement-fixation test in latent gonococcus infection has been embodied in this volume.

AN INTRODUCTION TO THE STUDY OF INFECTION AND IMMUNITY. INCLUDING CHAPTERS ON SERUM THERAPY, VACCINE THERAPY, CHEMOTHERAPY AND SERUM DIAGNOSIS FOR STUDENTS AND PRACTITIONERS. By Charles E. Simon, B.A., M.D., Clinical Pathologist to the Mercy Hospital, Baltimore, Md., etc. Second edition, revised and enlarged. Illustrated. 325 pp.

The new edition contains the notable achievements of the year which has passed since the first edition appeared. This implies of course, additional sections on the chemotherapy of cancer and pneumococcus infection; serum diagnosis of pregnancy; anti and normal serum therapy, etc. The work has also been carefully reviewed and given the benefit of a careful supervision. The physician of recent years has come to appreciate as never before the intimate relationship existing between medical science and the allied sciences of chemistry, physics and biology. A book such as this before us takes of the things of these subservient sciences and assembles them before the general practitioner aiding him vastly in the pursuit of his chosen profession.

MANUAL OF SURGERY. By Alexis Thompson, Professor of Surgery, University of Edinburgh; Surgeon Edinburgh Royal Infirmary, and Alexander Miles, Surgeon Edinburgh Royal Infirmary. Third Volume. Operative Surgery. Second edition, with 255 illustrations. Oxford University Press, American Branch, 35 West Thirty-Second St., New York. Price \$3.50.

This volume takes up the subject of operative surgery. The better operations are given with short, clear descriptions. The illustrations are well chosen.

The Basle anatomical nomenclature has been adopted but the older terms have been added, in brackets, for the benefit of those unfamiliar with the newer terms.

The volume should prove a handy reference work.

MEDICAL GYNECOLOGY. By S. Wyllis Bandler, M.D. Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Third thoroughly revised edition. Octavo of 790 pages, with 150 original illustrations. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$5.00 net; half morocco, \$6.50 net.

The profession will welcome the third edition of this important contribution to gynecological discussion.

The importance of the internal secretion in medicine is universally recognized, and proof is not wanting that the interrelations existing between the genital tract of women and the various internal glands is very close.

In this edition much has been added on the relation of the various secretory glands to pathologic states in women. The writings of Kermauner, Novak, Cushing, Biedel and others have been drawn on to bring these sections up to date.

SURGERY; ITS PRINCIPLES AND PRACTICE. FOR STUDENTS AND PRACTITIONERS. By Astley Paston Cooper Ashhurst, A.B., M.D., F.A.C.S., Instructor in Surgery in the University of Pennsylvania; Associate Surgeon to the Episcopal Hospital; Assistant Surgeon to the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases. Handsome large octavo, 1141 pages, with 7 colored plates and 1032 illustrations, mostly original, in the text. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1914.

Dr. Ashhurst has attempted to present the foundation on which the student's knowledge of surgery may be built. He has arranged the various subheads with the view of supplying a framework around which the student may develop his surgical knowledge.

Most of the illustrations are new and original, many of them in colors. This feature of the work deserves commendation.

Few references to original sources are given, which lessens the reference value of the book.

The work, however, should accomplish the primary purpose of the author.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eleventh edition. Thoroughly revised. Octavo of 1335 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$5.50 net, half morocco, \$7.00 net.

The commanding position attained by the preceding editions of this monumental work is easily held by this eleventh edition which has been carefully revised and brought up to date.

New subjects include diseases of the parathyroid gland, auricular fibrillation, auricular flutter, extra

systole, Lane's kink of the ileum, stenosis of the duodenum.

The following chapters have been rewritten: anti-typhoid vaccination, diseases of the thymus gland and pellagra. Important additions are numerous and among them may be mentioned McPhedran's sign of peritonitis in typhoid fever, Burke's reflex in typhoid fever, Prendergast's test in typhoid fever, Lee's sign in acute articular rheumatism, Postia's sign of scarlet fever, Iron's method of diagnosis of gonorrhoeal arthritis, radium emanations in gout, miostagmin reaction in gastric cancer, and many other topics of recent importance.

In this edition care has been taken to harmonize the pathologic sections with the current opinions of specialists and the matter has been systematically classified.

A TEXT-BOOK OF PHYSIOLOGY. For Medical Students and Physicians. By William H. Howell, Ph.D., Professor of Physiology, Johns Hopkins University, Baltimore. Fifth edition, thoroughly revised. Octavo of 1020 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$4.00 net; half morocco, \$5.50 net.

This new edition of Howell's physiology contains the results of the active work which has been going on in physiological chemistry and physiology proper, and which have added so greatly to our detailed knowledge of intermediary metabolism. In an actively progressive science constant changes in doctrine occur, and theories and principles are continually being subjected to scrutiny and question. Thus, for example, the likelihood that the body may under given conditions obtain some of its nitrogen for the synthesis of protein from inorganic sources would have been regarded as impossible a few years ago. A text-book must attempt the recognition of these new aspects when the views have reached a certain maturity, and the author expresses the hope that the present edition has not overlooked any significant advances which physiology has made since the appearance of the previous edition.

ANATOMY, DESCRIPTIVE AND APPLIED. By Henry Gray, F.R.S., Fellow of the Royal College of Surgeons; Lecturer on Anatomy at St. George's Hospital Medical School, London. New (American) edition, thoroughly revised and reedited, with the ordinary terminology followed by the Basle anatomical nomenclature, by Edward Anthony Spitzka, M.D., Director of the Daniel Baugh Institute of Anatomy and Professor of General Anatomy in the Jefferson Medical College of Philadelphia. Imperial octavo, 1502 pages, with 1225 large and elaborate engravings. Cloth, \$6.00 net; leather, \$7.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

In the review of the English edition, we pointed to the general excellence of Gray's Anatomy. This American edition is specially significant because it ushers in the new era of teaching marked by the raising and standardizing of requirements in nearly all the medical colleges of the United States. Anatomy will in the near future everywhere be taught according to the Basle Anatomical Nomenclature. The introduction of the B. N. A. terms following the ordinary terminology facilitates the use of either or both.

The book shows how critical has been the revision, and that the latest knowledge of anatomy and the most approved methods of presentation have been incorporated, bringing the book up to the highest point of usefulness. Colors are abundantly used, and dissecting directions accompany the descriptions of the parts.

Coming from the same press as the English edition we expected and find the press work practically flawless.

MODERN MEDICINE. ITS THEORY AND PRACTICE. In Original Contributions by American and Foreign Authors. Edited by Sir William Osler, Bart., M.D., F.R.S., Regius Professor of Medicine in Oxford University, England; Honorary Professor of Medicine in Johns Hopkins University, Baltimore; formerly Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal; and Thomas McCrae, M.D., Professor of Medicine in the Jefferson Medical College, Philadelphia; Fellow of the Royal College of Physicians, London; formerly Associate Professor of Medicine in Johns Hopkins University, Baltimore. In five octavo volumes of about 1,000 pages each, illustrated. Volume 1, Bacterial Diseases, Diseases of Doubtful or Unknown Etiology, Non-Bacterial Fungus Infections, the Mycoses (just ready). Price, per volume, cloth, \$5.00 net; half morocco, \$7.00 net. Lea & Febiger, Publishers, Philadelphia and New York.

The first volume of the second edition of this monumental work appears under virtually the same auspices as the first edition.

The second edition possesses many typographical improvements, such as larger and clearer type, an increase in size of the page, etc., and of course the many changes occurring in the realms of medical knowledge since the first edition appeared six years ago. We find a corresponding reorganization of the subject matter, new sections will be found dealing with pellagra, beriberi, trypanosomiasis, Malta fever and electrical diagnosis in cardiac diseases. There have also been certain omissions from the text, such as the introductory chapter found in the first edition, the historical section, the article on life insurance and others.

ANATOMY, DESCRIPTIVE AND APPLIED. By Henry Gray, F.R.S., Fellow of the Royal College of Surgeons, Lecturer on Anatomy at St. George's Hospital Medical School, London. New (English) edition, thoroughly revised and reedited, with the Basle anatomical nomenclature in English, by Robert Howden, M.A., M.B., C.M., Professor of Anatomy in the University of Durham, England. Imperial octavo, 1407 pages, with 1126 large and elaborate engravings. Cloth, \$6.00 net; leather, \$7.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

Each succeeding class of medical students has for the last fifty years enjoyed the advantage of an improved and amplified Gray. Gray's Anatomy is, indeed, a remarkable book—concise, clear, complete. In this eighteenth edition the histology has been shortened by confining the section to the description of the elementary tissues, considering the complex tissues along with the organs to which they belong, an arrangement much more satisfactory to the student.

The grouping of the Surface Anatomy under a separate heading is another practical improvement in the make-up of the book more readily referred to by the student who wishes to refresh his anatomic knowledge after witnessing a surgical procedure and a ready means of reference for the surgeon or physician.

Both the older and the Basle nomenclature are printed. To those who must unlearn the old terminology, the glossary at the end of the volume is most welcome and instructive.

Many anatomies have been offered since Gray's first appeared, none have surpassed it. If the editors will continue to keep it abreast of the progress in anatomy as they have done in the past it will always hold its place as the anatomy par excellence. The publishers' work is admirably done and the profuse illustrations are creditable alike to the artists and the publishers.

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

PUBLICATION } W. H. BREUER, M.D., Chairman
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ORIGINAL ARTICLES

SPRAINS *

HENRY C. SHUTTEE, M.D.
WEST PLAINS, MO.

A good many of us are inclined to think that, in regard to the treatment of the common everyday illnesses of life and the minor injuries, the final word has been said; but I believe some of us could get a good deal that is useful in our work if we spent a little time in considering such common matters.

A sprain is a severe twisting or wrenching of a joint with stretching or tearing of one or more of its ligaments, followed by effusion of serum or blood, or both, into the joint cavity, the surrounding tissues, or both. They are caused as a rule by the same sort of violence, though in lesser degree, as that which produces dislocations; in fact, a severe sprain is really a partial dislocation, the dislocated parts immediately resuming their normal position after being carried by forced movements beyond their physiological limits, or by movements at variance with the normal mechanism of the joint.

Sprains are most common in early and middle life, since after middle life the same force which in younger subjects produces a sprain is more likely to cause fracture, and joints that have once been sprained are more subject to a similar accident.

Sprains are of all degrees of severity, from the trifling wrench, the effects of which quickly pass away, to the most violent. In severe cases the ligaments, being inelastic, give way, and are partly or completely torn from their insertions; the tendinous sheaths and contiguous muscles are often torn, sometimes at a considerable distance from the articulation, and tendons are frequently displaced or severed from their insertions. The blood-vessels in and around the

joint may be ruptured, causing the joint cavity and surrounding tissues to be filled with blood. The line of displacement in sprains usually takes the direction in which there is normally the least motion, and through this unnatural motion the synovial membrane is unfolded on one side, and on the other compressed, crushed and often torn. The ends of the bones are contused and sometimes fractured. The articular cartilages are bruised, broken, or may be detached.

It is unnecessary to dwell on the symptoms of sprains, as they are familiar to all. The pain in the joint, which is the first symptom, is accompanied by immediate impairment or total loss of function. In severe sprains swelling rapidly follows, due to extravasation of serum or blood or both. Heat, pain, redness, swelling and impaired function, which we used to consider established inflammation, and which largely for years gave us an erroneous conception of the nature of the pathological changes following sprains and influenced for bad our treatment based on this erroneous conception, all follow a severe sprain, and unless some of us older men can totally disabuse our minds of the notion that the reaction following sprains is due to or threatens inflammation, some of our younger brothers, and even the irregulars, are going to treat their cases more scientifically and successfully than we. I still hear some doctors speak of the inflammation following severe sprains, forgetting that inflammation only follows infection, and as a result of this fear, based on a misconception of the pathology of sprains, confining joints for days or weeks in immovable and sometimes constricting dressings, and thereby inviting all sorts of disasters, as we shall see later. I will not here dwell longer on the pathology of sprains, but will discuss this somewhat more fully when we come to treatment.

The diagnosis of a sprain usually presents no difficulty, but if there is any doubt as to the exact injury, whether a sprain or a possible fracture, a Roentgen-ray examination or a radiograph should clear up the doubt.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

We come now to the treatment of sprains. For years we were taught that an injured part, especially a sprained joint, should be immediately placed at rest and kept at rest. The old fear of inflammation, as stated above, held us for a long time in its thrall, and not until recent years has the profession taken a more rational view, based on physiology as well as pathology, of the influence and importance of some exercise, either active or passive, in the treatment of sprains of joints, muscles, tendons, etc. The old Hunterian maxim that "The first and great requisite for the restoration of injured parts is rest," and the teaching of Hilton in his classical work on "Rest and Pain," still too greatly influence the profession in the treatment of traumas of nearly all kinds.

Have we not had a somewhat wrong conception of what constitutes rest? Our conception of rest has been that when we put the gross function of a part or parts at rest we are really securing physiological rest. But are we? I think a moment's consideration of a few elementary physiological facts will tend to disabuse our minds of the belief that when we put a sprained joint at so-called rest we are actually securing rest of the structures of that joint. Motion, which we can place at rest, is not the joint, but merely its function. The structures that make up the joint, like all other tissues of the body, in their ultimate constitution are composed of cells, and there is no such thing as cellular rest. It is true that there are periods of maximum and minimum activity of the cells, and during syncope and other conditions, possibly a complete arrest of the chemical changes that constitute vital cellular work, but for all practical purposes complete rest of the cells spells death. The repair of all injuries, whether of a joint or any other structure of the body, is brought about by a proper functioning of the cells of that part, and in considering any method of treatment we must bear this fact constantly in mind if we are not to do more harm than good by methods that might interfere with normal cellular activity.

Now in a severe sprain, as already stated, we have an effusion of blood or lymph, or both, with retardation of the lymphatic and return venous flow, and if we put the joint into an immovable dressing so as to place its function at rest, we are doing the very thing that will tend to prevent a proper functioning of the cells, and thus subject our patient to many risks that would be avoided by more rational treatment. Instead of trying to secure rest we should strive to procure more vigorous cellular action, for this is needed rapidly to repair the injured tissues.

It is an elementary fact of physiology that the venous circulation is carried on largely by

muscular contraction and relaxation. Brubaker says: "As a result of the relation which the veins bear to the muscles in all parts of the body it is clear that with the contraction and relaxation of the muscles there will be exerted an intermittent pressure on the veins. With each contraction, the blood on the proximal side will at once be driven forward with increased velocity, while that on the distal side will be retarded, will accumulate and distend the veins, owing to the closure of the valves; with the relaxation of the muscle the elastic and contractile tissues in the walls of the veins will come into play and force the blood forward." This is also, though perhaps in lesser degree, true of the lymphatic circulation, and Brubaker says muscular contraction and relaxation are very important factors in such circulation. If a sprained joint is put in an immovable dressing and the contraction and relaxation of the muscles thus completely prevented, we deprive the veins and lymphatics of this indispensable force to proper circulation, and as a result they become engorged, and although the veins partly relieve themselves by transudation of serum into the soft parts, the arterial supply continues, and the engorgement and transudation continue and increase. The venous stasis causes a very serious interference with all the ordinary nutritive changes in the affected part, because the blood is thrown back on the capillary circulation and on the arterioles, and detains in the former a quantity of blood which has been exhausted as a carrier both of oxygen and nutritive material, and which is therefore unable to sustain normal reactions between itself and the tissues within which it is confined. The real structures of which the joint is composed—the cells—become lowered in vitality, and their power of initiating and continuing the chemical changes necessary for repair is seriously diminished.

While such a condition continues, vigorous reparative action cannot take place; and unless by proper treatment we can overcome, at least in some degree, this handicap of the cells, we invite any wandering pathogenic germs that may be in the blood to claim squatter rights, and sometimes they become permanent residents, to the great detriment and sometimes irreparable injury of our patient. This is eminently true of the tubercle bacillus, as it is well known that sprains of joints are prone to be followed by tuberculosis in those susceptible to the disease. Under the old treatment of immobilization and so-called rest, this was much more likely to occur than under the more rational treatment of recent years. With fixation of the joint and the consequent decrease of normal vigorous cellular activity caused by the venous and lymphatic stasis and resulting infil-

tration of the tissues, a *locus minoris resistentiae*, so much emphasized by the late Senn in his "Surgical Bacteriology," is created, and thus tuberculosis is directly invited.

Now if what has been said is true, then the treatment of sprains of all degrees, excluding, of course, all those accompanied by fracture, should not be by fixation and functional rest, but on the contrary, such a line of treatment as will imitate Nature as closely as possible in her efforts to restore as nearly as may be normal venous and lymphatic circulation, and thus give the cells of the parts free play; and fortunately we can do this.

The treatment of sprains by proper strapping and exercise is, I think, rapidly supplanting the older methods, but I still meet those who adhere to the old way and seem afraid to direct exercise of any kind or degree, mainly I believe because of the fear of exciting what they erroneously believe to be inflammation. We still sometimes hear the remark that a sprained ankle is a more serious injury than a broken leg, and indeed under the old treatment it often is.

What then is the modern and correct treatment of a sprain? How can we best imitate and assist Nature in establishing normal conditions? The answer is, by proper strapping, exercise and massage. The strapping must be applied in such a manner as to envelop the injured joint completely, otherwise the requisite degree of pressure cannot be obtained which is necessary to secure compression when the parts are exercised. In this way complete and early recovery may be brought about, and the dangers greatly decreased. In addition to this, massage should be practiced every time the strapping is changed, beginning at the upper part of the swelling, the manipulation being a steady, uniform, gentle movement of stroking or squeezing, directed upward from the distal part of the joint, but always commencing on the proximal side of the injury, or at the proximal limit of the swelling. The object is readily seen to be the emptying of distended veins and waterlogged tissues. It is obvious that both retarded blood and serous effusion can most readily be made to pass on at the point where they border on healthy structures, and that the relief of the proximal portion of the swelling will at once open a door for the relief of the distal portion in a similar manner. By beginning pressure at the upper part and gradually descending in our stroking much of the effusion can be pressed out at each sitting, and usually in a few days the swelling is gone. The sprained part, as already stated, should be used as soon as properly supported by adhesive plaster, and thus by muscular contraction the effused material is rapidly pressed out of the injured part. Let us

take, for example, the ankle joint, which is the one most often sprained. Wharton P. Hood, to whose little book, "The Immediate Treatment of Injuries," I am largely indebted for some of the thoughts expressed in this paper, straps the ankle in this manner: The strips should be 18 inches long and 2 inches wide. He advises the thick moleskin plaster, but I have always used the common adhesive kind. The leg should rest horizontally with the ankle joint completely flexed. The middle of the first strip is applied to the sole of the foot, in front of the heel, and the two ends carried upward over the tarsus to cross in front, then brought around to terminate in front of the ankle. The middle of the second strip is placed at the back of the ankle joint, and the ends brought over the foot to cross in front, thus partly covering the first strip, making a figure of eight. The third strip should reinforce the second and be placed a little below it, the ends crossing over the instep, a notch first being cut out of the lower margin of the strip at its center, to remove any hindrance to upward movement of the heel. A fourth strip is now placed above and overlapping the second. Over these is placed a roller bandage so as to secure an even and snug fit. The strips should be applied smoothly and snugly, but not tightly, to the actual contour of the skin, care being taken that no one of the strips is tighter or slacker than the others. This places the inclosed joint in a case which offers no impediment to motion, but secures an insuperable obstacle against swelling. If now the patient is made to walk about, the action of his muscles on the veins not only soon squeezes away any small amount of effusion or collection of venous blood in the tissues, but the movement of the articular surfaces on one another exerts the same effect on any effusion into the joint cavity, which is too deep to be influenced by rubbing and massage.

If the patient is not seen until after great swelling has taken place, it may be best to rub the joint in the manner described two or three times a day until the swelling is somewhat reduced, when the plaster should be applied. As soon as the plaster has been applied, the patient should be made to walk, and in the first few attempts an assistant may be necessary partly to support him; but he should be strongly impressed with the fact that his recovery will be rapid in direct proportion to the use of the joint. The first few attempts to walk will be accompanied by some pain, and at times this will be great, but it will diminish at each succeeding attempt, and soon become negligible. If the patient has followed directions and used the limb, the swelling will be somewhat or even greatly diminished at next visit, the diminution depending on the amount of enthusiasm dis-

played in following directions; but if there has been no decrease in the swelling it may be taken as positive proof that he has not used the joint as he should have done. As soon as the swelling has somewhat decreased, the plaster should be removed, the injured part thoroughly massaged, and the joint dressed in the same way. It will be plain after a moment's thought that this method of strapping joints and immediate exercise really constitutes a sort of auto-massage, and it is sometimes astonishing how quickly a severe sprain accompanied by great swelling will recover when this method is faithfully carried out both by doctor and patient. The effused blood and serum are so quickly removed, and the handicap to the normal vigorous functioning of the cells thereby overcome, that no organization of effused material can take place, and the patient recovers without the stiffness and impairment of the joint that so often followed the old method of immobilization and rest.

The Cotterell-Gibney method of dressing a sprained ankle is not so effective as the Hood method in that it does not completely envelop the joint, and therefore the full effect of exercise of the muscles in pushing on effusion and stagnant venous blood cannot be obtained; but when only support of one side of the ankle is desired, it serves better.

The same principle in strapping should be carried out in the treatment of sprains of all joints, as well as in muscle or tendon sprain, the dressing being modified to suit the different parts. Thus, in dressing the knee, in order not to interfere too much with the motion of the joint, a little absorbent cotton should be placed in front and behind the joint in order to prevent plaster at these parts from adhering to the skin.

In cases coming under treatment late, or those treated unsatisfactorily by the old method, or when from any cause more stimulation is needed, hot water baths, or alternate plunging into very hot and very cold water, or the dry hot air treatment, in addition to massage and use of the joint, are indicated.

DISCUSSION

DR. M. P. SHY, Sedalia: I would like to lay a little bit of stress on the method of strapping the ankle. I think it would be a very exceptional case where you had a sprain on both sides, on two sides of the joint. When you get a sprain, it is caused by turning the joint one way or the other and you naturally get a sprain on one side. The method of using the narrow strip is very effective. We use about six long strips and six short ones, and, if you like, you may envelop the entire ankle and it will impair the motion of the joint to about the right extent. You do not want entire immobility of the joint in treating a sprain; you want to hit a happy medium between the old way of putting on a cast and taking away all motion, and not restricting the motion at all.

This plaster treatment will restrict the motion and act as a brace, and, at the same time, allow some little motion, but the advantage is putting them on and keeping them on and making the patient walk on the foot and not allowing him to have crutches. You can allow these patients to have canes and walk and not allow crutches.

DR. C. W. RUSSELL, Springfield: In sprains, of course, the first thing to do is to determine whether you have a complication of fracture along with the sprain, as the essayist said in his paper; but having diagnosed it perfectly, you may have a torn ligament on one or both sides of the joint, depending on whether your sprain is due to a twist or whether it is due just to turning the ankle over to one side. In case it is due to a twist, you may get a torn ligament on both sides of the joint. I have used the method advocated by Dr. Shuttee in several cases. The patients get around quicker than in the old way of binding the joint up and keeping it immobile. The point should be emphasized that we get results quicker on account of the stimulation of the cell activity in and about the processes that are injured. Patients lose less time by our getting them around on the sprained member immediately.

DIAGNOSIS OF CONGENITAL SYPHILIS IN INFANTS AND CHILDREN *

EDWIN HENRY SCHORER, M.D., DR.P.H.
KANSAS CITY, MO.

To know tuberculosis, typhoid fever, pneumonia and syphilis, fairly well qualifies a man as a physician. Because of its variability in malignancy, its ability to manifest its lesions in all parts of the body early or late after the infection occurs, and the persistence and congenital transmission of the *Spirochaeta pallida*, syphilis is a disease that plays a most important part in the early and middle periods of most of our lives. Tuberculosis, the so-called white plague, while widely distributed throughout the world is but seldom inherited, but lues, usually responding so well to treatment as far as symptoms and signs are concerned, on the other hand is frequently unknowingly transmitted, and there can be no doubt that many more than actually know it have defects due to inherited lues. The manifestations of lues in children are most variable and the occurrence of syphilis in children is so frequent and the early treatment so successful as far as the child is concerned that it behooves those that assume the responsibility of the care of children to learn to recognize and treat the disease early.

In children we see both acquired and congenital syphilis, but of the two, hereditary syphilis occurs more frequently. The principle sources of infection in acquired lues are: (1) External lesions on the parents, nurse or others caring for and fondling or kissing the child;

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(2) lesions on the genitalia of the mother at the time of birth; (3) sexual contact; (4) wet nursing; (5) vaccination; (6) other children; (7) irregular practices.

The symptoms and signs of acquired syphilis in children are not unlike those in adults, but the primary sore is more frequently on the lips, mouth or some part of the face and less often on the genitalia.

The principle sources of infection in hereditary lues are sperm and germ infection; that is, either the father or mother or both have syphilis. Text-books generally state and experience apparently indicates, that if both parents are luetic the child is usually but not invariably so; that the closer the occurrence of the primary sore to conception the greater the likelihood of infection; that if the mother or father are in the secondary stage, transmission is almost certain to occur, but that if active treatment has been employed for several months or the disease is in the tertiary stage the offspring will probably escape; that a woman who has borne a syphilitic child is herself immune and cannot be infected, even though she have no symptoms or signs of syphilis (Colle's law); that if both parents are healthy at the time of conception but acquire the disease during pregnancy, the children may or may not be infected; that first-born children of syphilitic parents are more likely to have syphilis than the later ones.

Many of these statements are now doubted by some and the opinion we accept must be based on our determination of the value of the newer tests for the diagnosis of syphilis and on what we shall recognize as symptoms and signs of hereditary syphilis in infants, children and adults.

The lesions and symptoms of syphilis vary, but may be broadly divided into:

1. Those affected by syphilitic treatment.
2. Those not affected by syphilitic treatment.

To the first group belong the symptoms and signs appearing in the primary, secondary, tertiary and to a certain degree those of the para- and meta-syphilitic stages, and to the second group belong some of the para- and meta-syphilitic stages and lesion and abnormalities frequently not recognized and regarded as syphilitic.

The frequency of occurrence of congenital syphilis is most probably underestimated. When we remember that lues is not a self limited disease but depends for its cure on ridding the body of the *Spirochaeta pallida* by means of chemical agents, that the disease may exist for years without manifestations, and that marriage is an unrestricted international institution, we must recognize that syphilis in the first and second generations must occur very frequently.

The occurrence of syphilis both acquired and congenital has been found to be more frequent since the introduction of the Wassermann, luetin and other tests than was the case when clinical diagnosis was depended on. Some infections are only diagnosed by therapeutic tests, and we have reason to believe that lues plays a part in some of the deficiencies and irregularities in development that cannot be attributed to be due to lues by clinical, serum and therapeutic tests. Just as acquired syphilis may be dormant for years, so also congenital syphilis may not manifest itself for a long time and for years these patients may not be regarded as luetic.

SYMPTOMS AND SIGNS OF CONGENITAL SYPHILIS IN THE YOUNG

The symptoms and signs of congenital syphilis are many and have been described at length in the text-books. Unfortunately, the symptoms and signs are not clearly marked and demonstrable, a majority are not present in any one case, and in some do not appear early enough to be of real value, so that frequently lues is ruled out or not even thought of at the time the patient is presented.

Generally it may be said that the diagnosis of hereditary syphilis is easy, but not nearly as easy as most text-books would teach us. Most of the classical symptoms as coryza, eruption, moist papules on the genitals and about the anus, enlarged spleen and glands and so on are not only seen in congenital syphilis but occur also under other conditions, so that to make the diagnosis on the presence of one or two of these signs is hardly fair. In a majority of the cases the infants appear healthy at birth, continue so for a variable period of time even though slowly declining in condition, and in some 30 per cent. of the instances die very early in life.

An attempt will not be made here to describe the lesions of syphilis, for to a certain degree that is futile in an hour's or even twenty-four hour's presentation. In many cases the suspicion of the existence of congenital syphilis must rest on clinical experience, observation and a careful study which is partially dependent on instinct. Nor must it be believed that congenital syphilis always produces anatomic changes for it often happens that at autopsy there are no demonstrable changes except the presence of the *Spirochaeta pallida*.

Some of the deaths can and should be avoided. Naturally the question arises as to how to do this. Certainly waiting for indisputable signs and symptoms to appear is not advisable. Not nearly all untreated congenitally syphilitic children die in the early years of life but practically all of these are a source of

worry to the parents, physician and pediatrician. I have no doubt that many so-called difficult feeding cases occur in the luetic. It must be remembered also that the lesions or symptoms need not always appear in the first year and still such children show irregular development long before symptoms appear. The tardily developing symptoms of inherited syphilis may not occur before early manhood, but usually appear by the eighth or tenth years. Parenchymatous keratitis, roughness of the ends of the bones of the knees, gumma in the muscles and syphilides in the skin are the usual symptoms in tardily appearing inherited syphilis. Many physicians use the syrup of the iodid of iron for these irregularities and believe the good results obtained are due to the iron when as a matter of fact they are probably due to the iodid.

Congenital syphilis is treated by the same agents as acquired syphilis. It must be remembered that syphilis is not a self-limited disease nor is it a disease in which the body needs only to be supported, but it is an infection for the cure of which *Spirochaeta pallida* must be disposed of. This mercury apparently is able to do when used in sufficient quantity and over a long enough period of time. In addition to mercury in the treatment of syphilis, potassium iodid has usually been used. More recently salvarsan and the arsenic preparations have been advocated, first on the basis of one sterilizing dose, then of smaller doses and now in combination with mercury and potassium iodid. The treatment of syphilis in children is somewhat more complicated than is syphilis in adults. Often we dare not bring up the question of syphilis with the parents and except in hospital patients absolute diagnosis is often impossible. Just as I have not taken up fully the symptoms and signs of inherited syphilis, so also I do not want to discuss the treatment in detail. What I wish to emphasize is that every case of inherited syphilis is a separate study from the diagnostic, social and therapeutic standpoints.

CONCLUSIONS

1. Syphilis is a disease which is not cured until all the *Spirochaeta pallida* in the body are destroyed. Apparently recovery easily occurs on proper treatment and there may be no manifestations of the disease for years, thus giving the patient assurance of freedom from the infection though *Spirochaeta pallida* still persist in his body. These facts together with unrestricted and international marriage undoubtedly make us realize that syphilis probably exists in the ancestry of many of us.

2. The manifestations of inherited syphilis vary a great deal and to understand these and

recognize the existence of the disease is not always easy but frequently requires great study.

3. When the disease is recognized, tact in the management of the treatment is of great importance.

4. Children with inherited syphilis can usually be cured and become good and useful citizens.

5. If we remember the foregoing conclusion we can undoubtedly say that there will be fewer difficult feeding cases, fewer patrons of advertising physicians, and I believe fewer Christian Scientists.

1010 Rialto Building.

PLACENTA PRAEVIA *

F. T. VAN EMAN, M.D.
KANSAS CITY, MO.

The ordinary, and, speaking relatively, commonplace events which occur in the course of a normal gestation, labor and puerperium are so well known to us all that a discussion of any particular feature of these processes would be almost a waste of time. But there are certain conditions which are comparatively rare and which arise and at once take the matter out of the normal class and places it in the pathologic division. The sudden discovery of a placenta which is implanted below the safety zone in a case which has been going along quietly and calmly most certainly at once lifts this case out of the realm of safety and places it over a powder magazine.

This paper has two objects: first to report two cases treated by two widely separated methods; in fact, the treatment represents the two extremes, the one by accouchement forcé, the other by a cesarean section; and second to bring out a discussion as to the choice of procedure in the various types of placenta praevia, and particularly those which are found to be centrally located.

However, it will be well to review briefly a few of the well-known facts regarding the condition under discussion.

De Lee says that "placenta praevia is the development of a placenta, in part or wholly, within the zone of dilatation of the uterus. The placenta may attach itself to any portion of the uterus, attachment to the fundus being the rarest, while that to the posterior wall is the commonest. The anterior wall is the next common site of attachment, while the lower uterine segment is the least common. To be

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting, held at Joplin, May 12-14, 1914.

normal, the lower edge of the placenta must be at least 10 cm. above the internal os."

Various figures as to the frequency are given, from one in two hundred and fifty, to one in fifteen hundred cases, multiparae being the most susceptible, and central implantation the least frequent of all types (less than 20 per cent.). It is apparently more common in patients of advanced age.

Chronic endometritis, multiparity, with one pregnancy rapidly following another, subinvolution and twin pregnancy are given as predisposing causes, while a primary low insertion of the ovum near or at the internal os, and the development of the placenta in the reflexa and its coming to lie over the internal os are given as active causes (De Lee).

Webster brings up a point that seems quite plausible, and that is that while it is generally conceded that the union of the male and female cell usually takes place in the tube, yet it is possible that this may occur in certain cases, low in the uterus, thus giving rise to a low implantation and a placenta praevia.

Symptoms.—The first and most constant sign is hemorrhage without pain and with no apparent cause. This occurs most frequently in the last three months of gestation. De Lee says, "A painless, causeless, uterine hemorrhage in the third trimester of pregnancy is almost pathognomonic of placenta praevia." The bleeding may be but slight, or there may be a sudden gush, and it is possible to have a hemorrhage so great as to be fatal, although this is rare. After a period of quiescence, the bleeding occurs again and then again, becoming greater with each succeeding attack, and resulting finally in a high-grade anemia. Labor usually supervenes after several hemorrhages, yet the patient may go to term as did the one whose history is to follow. Centrally implanted placentae usually give rise to bleeding earlier than the other types, while in a lateralis the bleeding is more constant, and in a marginalis it is slight. This is in general, and there are many exceptions.

As to the origin of the bleeding, it may come from the sinuses of the placental site, the intervillous spaces; the circular sinus of the placenta and from the fetal blood-vessels in the villi.

During the painless uterine contractions which occur in pregnancy, the lower edge of the placenta becomes detached and bleeding results. The bleeding is not by any means confined to the last trimester of pregnancy, for it may occur as early as the beginning of the third month, though, as before stated, it is most common in the last three months. The earlier the bleeding, the greater the probability of a central implantation. During pregnancy the bleeding is not likely to be a source of danger, except by

frequent attacks, and the resultant anemia. But at the end of pregnancy, or in the beginning of labor, it may assume alarming proportions. As to the other symptoms, there are none which are sufficiently constant to serve as a guide in a diagnosis.

As to diagnosis, what has already been said as to a painless, causeless hemorrhage occurring especially in the last three gestational months, will at once put the careful accoucheur on his guard, and he will, in practically all cases, be able to clear up the diagnosis by an internal examination by which he will be able in most cases to locate the placenta and determine the type with which he is dealing. It is unnecessary to advise caution and gentleness in our manipulations, and it is the better part of wisdom to be prepared for emergencies when making examinations, for the slightest effort may result in a serious hemorrhage.

By exclusion, we are to dispose of varicosities, hemorrhoids and the more grave conditions, viz., a uterine rupture, ectopic gestation and an abruptio placentae. It does not seem necessary at this point to discuss either uterine rupture or ectopic gestation, but a few words as to abruptio placentae may not be amiss. This, as is well known, is the forcible tearing of a normally implanted placenta from its site. Its onset is sudden and stormy, while that of placenta praevia is rather quiet; there is abdominal pain, in placenta praevia usually none; the hemorrhage, internal or external is usually severe, while in placenta praevia it is usually external to begin with and at first is slight; there is usually only one hemorrhage, in placenta praevia, several; there may be an easily found cause, such as an injury, in placenta praevia, none; the symptoms are more severe than the amount of external hemorrhage would indicate, while in placenta praevia symptoms are usually in proportion; cessation of fetal movements, in placenta praevia, no change; abdomen distended and tense, in placenta praevia, no change; uterus tense, in placenta praevia, soft; heart tones absent, in placenta praevia, present; no placenta felt vaginally, in placenta praevia, placenta felt; bag of waters tense and head felt, in placenta praevia, loose and head not engaged. These make up most of the points in general which will guide us in differentiating between a placenta praevia and an abruptio placentae.

The prognosis is of the greatest interest to the obstetrician, for it is from the results that we must determine our method of treatment in a given case. In one series of 2,153 cases, 7.7 per cent. maternal and 61.46 per cent. infant mortality is reported; in another series of 6,569 cases, 9.3 per cent. and 58.7 per cent. mother

and child, respectively; in another series of 726 cases, 19.7 per cent. and 48 per cent., and in still another series of 8,625 cases, 7.22 per cent. and 55.5 per cent. Striking an average of these 18,073 cases we have a maternal mortality of almost 11 per cent., and an infant mortality of almost 56 per cent. In the series of 726 cases it is interesting to note that these were all private cases and that the maternal mortality was much higher (19.7 per cent.), while the infantile mortality was the lowest (48 per cent.).

Centrally located placenta give the highest death-rate, both for mother and child, a point which we must take into serious consideration in deciding on the method of treatment in a given case.

Hemorrhage in a patient whose blood-supply is already depleted; hemorrhage from the condition *per se* or from injury during delivery; sepsis, easily developed on account of the close proximity of the placental site to the vagina and on account of the necessary and hasty manipulations in delivery; rupture of the uterus and air embolism are the causes of most of the fatalities.

Post partum morbidity is high, this being due to anemia, infection and operative damage.

Treatment.—To those of us who are interested in obstetrics and who have followed the literature in recent years, it must be apparent that the pendulum has been swinging very vigorously, and mostly along the line of treatment of certain conditions; e. g., the "do something" plan of treatment in puerperal infection of a few years ago is now almost obsolete, and we are now advised to follow the "do nothing" plan; no douches, vaginal or intra-uterine; no curettage, either digital or instrumental.

It will be of interest at this point to call attention to an article on the treatment of puerperal sepsis by Dr. Wilbur Ward, published in the Obstetrical and Gynecological Report of the Sloane Hospital of New York, in which their routine treatment is anything but the "do nothing" type. In fact, the writer sometimes thinks that no matter what you do, you can find very good authority for it.

In a similar way the pendulum has swung in regard to the treatment of placenta praevia, many good men now agreeing that an abdominal cesarean section is the procedure of choice in these cases, especially in those of central implantation.

In general, having made a correct diagnosis of a placenta praevia, there at once comes up for consideration several factors in a given case; the environment of the patient; the possibility of getting her to a hospital quickly in an emergency; the ability of the patient to meet the extra expense of trained nursing at home

and hospital care when needed; the desire of the patient for a living child; the time in gestation at which the condition is discovered, and the particular type of placenta praevia in the case at hand.

If the bleeding is very slight, if the child is viable or if the patient is near term, it may be wise to permit her to go on, providing that she can be placed in a good hospital at once, or if not, then under trained care with a hospital close at hand.

Any other conditions prevailing, pregnancy should be terminated as soon as the diagnosis is positively made; in fact, in the writer's judgment, even a very strong suspicion will suffice.

The choice of methods to accomplish this purpose will depend on the preference of the attendant; manual dilatation and immediate extraction; the Braxton-Hicks method in later cases; the use of the metreurynter or bag until the cervix is sufficiently dilated for application of the forceps or a version, and last a cesarean section in a case at full term and labor begun.

To my mind the question of a cesarean section as a procedure of choice in cases of placenta praevia, especially those which are centrally located, is of the greatest importance in this discussion, and in order to view the matter from its different angles I have written to a number of the leading men in the United States asking their opinion on this question, and I now take pleasure in presenting them.

Dr. J. Clifton Edgar, New York, says: "In selected cases, cesarean section would be the operation of choice, but in selected cases only, such a case would be a para-I with the supravaginal cervix still present and a tendency to persistent bleeding. In my opinion, most cases of placenta praevia (central variety) can be treated along the modern lines of management. We cannot neglect the fact that many central implantations with one finger dilatation turn out to be partial at three or four fingers dilatation and hence not in the more serious class."

Dr. Howard A. Kelly, Baltimore, says: "Given good hospital facilities and the necessities for satisfactory technic, I believe that the cesarean section is the method of choice."

Dr. E. Gustav Zinke, Cincinnati, says: "By separate mail I am sending you a reprint which sets forth my view on cesarean section for placenta praevia."

The last paragraph of his reprint on the "Treatment of Placenta Praevia" reads thus: "No one can compare the results obtained with abdominal hysterotomy in the cases of placenta praevia with the results which follow the use of the tampon, the balloon, manual and metal dilatation and version with slow extraction of the child without coming to the conclusion that the conservative cesarean section is the only

means by which the maternal as well as the fetal mortality can be further reduced."

Dr. Barton Cooke Hirst, Philadelphia, says: "I would at present, and have for more than a year past, adopted the cesarean section as the only treatment of central placenta praevia."

Dr. Jas. D. Voorhees, New York, says: "I believe abdominal cesarean section is indicated in central placenta praevia when the child is near term, where the cervix is firm, where a live child is desired, of course if it is also associated with a contracted pelvis."

Dr. Voorhees has a most interesting article in the Sloan Hospital Report on the use of the modified Champetier de Ribes balloon for dilating the cervix, and reports a series of 24 cases of placenta praevia centralis successfully treated in this manner.

Dr. Edwin B. Craigin, New York, in his article on placenta praevia in the Sloane report says he believes the indication for cesarean section occasionally arises, but not often, and in his letter he says: "I believe in a few exceptional cases of central placenta praevia with long rigid cervix and marked hemorrhage, cesarean section is indicated, but in ordinary cases I prefer the elastic bag for several reasons. Among these may be mentioned the following: Even after the child and placenta are delivered, one has to contend with a post-partum hemorrhage, and I believe we can control this better if the abdomen and uterus has not been cut. A uterine wall after cesarean section is not as safe for a subsequent normal labor."

Palmer Findley, Omaha, Neb., says: "I have never done a cesarean section for placenta praevia and unless there is an additional indication for cesarean section, such as a fibroid or a contracted pelvis, I do not think that I shall ever do it. I fear hemorrhage and infection in such a procedure, and am content to use a hydrostatic bag, and to take my chances on the life of the child in the interest of the mother. It is my belief in doing a cesarean section for placenta praevia, that we double the maternal mortality by diminishing the fetal mortality by half. In other words, for every child we save, we lose a mother as compared with the delivery of the child through the natural passage."

These letters are all answers to my question, "I should like to know your view on an abdominal cesarean section as the procedure of choice in cases of centrally located placenta praevia, with the patient at or near term, there being no other indication for the operation." Dr. Craigin brought up one very important point, which was the fact that a uterus that had been subjected to a cesarean section is not as safe for subsequent normal labor, and this is undoubtedly true in some cases, and as an illustration

of this fact, I wish to call attention to an article published in *The Journal A. M. A.*, Feb. 28, 1914, in which Dr. Louis I. Breistein of San Francisco reports a case of rupture of the uterus in which, following a cesarean section there had been one normal and spontaneous delivery, and then a rupture of the uterus in the next pregnancy. There had been a uterine infection following the cesarean section, and his conclusion was that a cesareanized uterus which becomes infected may rupture at the site of the old scar in a subsequent pregnancy, while one which has healed by primary union is relatively safe.

De Lee recommends two methods of treatment, the Braxton-Hicks version, and metruerisis, but also says: "In the isthmial variety of placenta praevia where the placenta is planted squarely over the internal os, and hangs like a festoon above it, the maternal mortality is so high that abdominal delivery is strongly the method of choice, and that the indication for cesarean section will arise in cases of central and partial placenta praevia when pregnancy is at or near term, with a living child, the mother in good condition, the cervix being closed or promising difficulty in dilatation, conditions most common in primiparae."

The first case which I wish to report briefly was that of a patient who was under my observation a number of years ago. She was a victim of a husband's syphilis, her first pregnancy going to term, with a syphilitic child which soon succumbed. Her second pregnancy went to term, the child developed syphilitic manifestations, but under treatment apparently recovered. The next three pregnancies resulted in abortions at about the third month. When her next pregnancy occurred, she came under my care in its beginning, and under active specific treatment, we succeeded in carrying her along quietly until the end of the seventh month, when one morning without a single warning sign, without one pain, there was a sudden gush of blood from her vagina. She at once went to bed and sent for help. I found no bleeding and confess that at first I did not think of placenta praevia, but supposed that we were having the same old trouble, only at a later date than usual. An internal examination, however, showed a very patulous cervix, one that readily admitted my finger, and just at the edge of the internal os, the placenta could be felt, a placenta praevia marginalis.

Interference was advised, and this advice was accepted. Under complete anesthesia a manual dilatation with immediate extraction of the child, and then delivery of placenta was performed. Convalescence was without event.

The next case was in a woman 39 years of age, who was going through her sixth pregnancy. The previous pregnancies had been normal in every way, excepting in the last one, the fifth, there had been a very unusual tendency to varicose veins. In this, her sixth pregnancy, the varicosities were even more marked—abdomen, vulva and legs.

Between the third and fourth months, she had her first uterine hemorrhage, at which time she was seen by a neighboring physician. Later on, she came under the care of Dr. Walter M. Clemmons of Kansas City, who brought her in from her suburban home, to a place very near the hospital, and four weeks before

the date of expected labor, she was placed in the hospital. Hemorrhages occurred at frequent intervals, and several times her vagina was tamponed. Dr. Clemmons had, of course, made a diagnosis of placenta praevia, and through his careful attention, she was carried to term, showing little or no effect of her repeated hemorrhages. She began labor on March 1, and was first seen by the writer with Dr. Clemmons at 4 a. m. I found her bleeding profusely, labor pains of a poor character, cervix dilated sufficiently to admit two fingers, and not rigid, internal os completely blocked off by the placenta, head low but not well engaged.

There having been practically no internal manipulations and therefore no special danger of infection, it seemed that the best chance for the mother, and far the best for the child, was an abdominal cesarean section. The matter was therefore explained in plainest terms to all parties interested, and on their election for operation, she was at once taken to the operating room and prepared for section. Extraction of the child and placenta required 40 seconds, the entire operation, 21 minutes. No difficulties were encountered, and there was little bleeding though no preliminary steps were taken to prevent hemorrhage, except a hypodermic of ergot which was given just before the abdomen was opened. As soon as the uterus was emptied, it contracted nicely. A stitch abscess gave us a little trouble on the eighth day, and on the twelfth day, her left leg became swollen and painful, and a phlegmasia alba dolens seemed imminent. However, three days elevation of the limb was all that was required to clear up the trouble, and three weeks from the date of her operation, our patient returned to her home in good condition, taking with her a fine boy baby, and no further event has occurred to mar her convalescence.

CONCLUSIONS

1. A placenta praevia of any type is pathologic.

2. Two vital interests are up for consideration, the first in importance is that of the mother, all views, religious or otherwise, to the contrary, notwithstanding; and second, that of the child.

3. A placenta praevia of any type, positively diagnosed at any time up to the end of the seventh calendar month, calls for an immediate termination of pregnancy, the child being or not being viable. If viable, an abdominal section may be the method of choice.

4. The bleeding having been slight, the patient having arrived at or near term, with any type of placenta praevia, delivery may be made by the method best handled by the accoucheur—Braxton-Hicks, metreuryisis, or preferably cesarean section.

5. With the patient at or near term, with placenta praevia centralis, abdominal cesarean section, in the writer's opinion, offers the safest method of delivery for both mother and child, providing the possibility of infection is at the minimum and that the environments of the case are suitable, and in addition providing that the mother's condition justifies the operation.

407 Argyle Building.

TREATMENT OF THE DEFORMITIES FOLLOWING INFANTILE PARALYSIS*

ROBERT McEWEN SCHAUFFLER, M.D.
KANSAS CITY, MO.

It is claimed that if cases of infantile paralysis are properly treated there will be no resultant deformities. Some physicians, especially some of the nerve specialists, insist that apparatus is not necessary for the prevention of deformity. This is plainly not true in the severe cases. In a large number of cases it is conceivable that by long-continued massage and by stretching of the strong muscles daily by passive motions, and by the closest attention to posture and gait, deformity may be avoided without the use of apparatus. Except in mild cases, this involves more persistent care than the patient is likely to receive from either physician or parents. By early and skillful application of splints of some nature to the medium and bad cases, deformity can undoubtedly be entirely prevented. But either through the failure of the physician to appreciate their importance or the unwillingness of the parents to undergo the expense and annoyance, this is often neglected. We have, then, in actual practice many cases presenting deformities already established. When the paralysis is extensive, resulting in dangle limbs, there is little tendency to early deformity. Finally, they tend to become stiffened by the contraction of the tendons and ligaments in the positions habitually assumed passively, as the sitting posture with a dropped foot, or in such positions as result from the unopposed pull of the few remaining healthy muscles. When only one group of muscles is paralyzed, localized deformity tends to appear early and become marked on account of the loss of balance in the limb. Gravity and weight-bearing naturally are contributing factors. If stiffness does not result, an increased mobility with a tendency to constantly greater deviation from normal toward the relaxed side causes an equal disability. The retarded growth of the limb, due to trophic changes, may cause shortening, with its consequent secondary deformities of the pelvis and spine. Early and persistent use of the limb, with appropriate support, is the greatest factor in preventing or minimizing this dwarfing.

It is proposed to limit the scope of this paper to the treatment of deformity already existing, and only when caused by poliomyelitis. This subject has been extensively discussed in medical literature in recent years. One of our own

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members, Dr. Allison of St. Louis, has presented timely articles for a considerable period of years, which cover quite completely the more important advances in the treatment of these conditions. However, on account of the voluminous literature of the subject, the large variety of procedures advocated and the differences of opinion, I thought it might be of some small interest to report what had been, in my personal experience, found simple and practical, and what of the newer procedures seem most promising.

The reports are based largely on the work of myself and my associates in the Mercy Hospital in Kansas City.

We will begin with the lower extremities. The general plan is: first, to restore the limb or limbs to their normal positions; second, to see what further recovery of function in the injured muscles will take place with use of the limb when properly supported, with the aid of massage, heat and special exercises. One can hardly call attention too often to the fact that many muscles, apparently greatly or completely paralyzed, are suffering from overstretching and, when given prolonged support in a position where they are protected from stretching, recover a considerable degree of power. With a dropped foot, for instance, for months the brace should never be left off, except when removed for exercise, and then the foot should be supported at a right angle and passive and active efforts made to diminish the angle.

Third, to take stock of the residual disability and decide what permanent brace support may be necessary or what measures can be instituted looking to the ultimate removal of external support. These consist, first, of efforts to restore muscle balance. Strong muscles may be weakened by lengthening their tendons or shifting their insertions, or they may be transplanted to the weak side of the limb to assist or replace damaged muscles. Weak muscles may be shortened or their insertions shifted to points of greater mechanical advantage. Second, the weak side may be strengthened by the shortening of ligaments and by the reinforcing of ligaments with adjacent tendons or by free transports of fibrous tissue or by silk strands. This may be carried to its extreme limit by the suspension of flail joints by the fixation of the tendons of paralyzed muscles or by heavy strands of silk. Such supports should be anchored under periosteal bridges, or to drill holes in bone. The overlapping of layers of fascia and the excision of redundant skin are accessory procedures. Finally, the affected joints may be partially or completely ankylosed by the introduction of silk strands or by operations for arthrodesis.

Usually several of these procedures may be combined with advantage:

First: If the limb can be placed in the anatomic position, or better still, in a slightly over-corrected position, it is so placed, and a plaster cast or brace applied. If a brace, it is worn day and night, or a walking brace and a night support are provided. We never expect to exert force by means of a brace to correct deformity. The brace is only expected to hold a flaccid joint in position, or to retain what has been gained by the correction of the deformity, to prevent relapse and to protect weak muscles and to furnish support necessary for bearing weight. In lateral curvature of the spine the brace or jacket is somewhat corrective after application by the pressure exerted by respiratory movements. If the deformity is resistant, an anesthetic is given and moderate force is used; but if that is not sufficient, all bands of fascia, muscles, tendons or ligaments which are resistant are divided. This must be absolutely thorough. For tendons, subcutaneous division is usually sufficient, but in some cases, especially with the hamstrings, tendon-lengthening operations are better. Even if the work must be done in several stages, the correction must be complete. It may be impossible to straighten a flexed knee completely at one sitting, on account of the tension of the popliteal vessels, but they can be finally stretched.

Sometimes some of the simpler procedures under the third heading may be carried out at this time, but they should be confined to strengthening lateral ligaments and shortening fascia and skin. The more radical suspension operations and arthrodesis should never be done early, as no one can predict the amount of recovery which may take place in muscles apparently useless.

Let us pass from generalizations to more specific cases to illustrate the procedures under the third heading—reconstruction. In every case it is presupposed that resistant deformity has been already corrected.

For eversion of the foot with dropping on the inner side, we plan to do whatever seems effective for correction, beginning with the simplest procedure. The inner tarsal region is exposed and the internal lateral ligament tucked by sliding and suture, or reinforced by a transplant or silk. It may then be sufficient to unite the anterior and posterior tibials laterally or to cut the anticus tendon low, pass it around or through the posticus and suture to the periosteum. The fascia and subcutaneous tissues are then sutured over the tendons and a flap of skin excised and sutured; in short, everything to take up slack on the inner side of the joint. When the damage to the anticus is more complete and the disability greater, if the extensor proprius hal-

lucis is in good condition, which is usually shown by the tendency of the great toe to be hyperextended as the foot drops, we divide this tendon at the base of the toe and secure it firmly to a drill hole in the first metatarsal, thus giving it a firm attachment for holding up the inner side of the foot. The distal end of the tendon is sutured to the extensor of the second toe. If this muscle is itself damaged, the peroneus brevis is transplanted to near the insertion of the tibialis anticus and secured to periosteum, best under a periosteal bridge. Where the anticus muscle is considered entirely useless, its tendon is always used to reinforce the overstretched ligaments by firm fixation above.

We never depend entirely on a transplanted tendon, but make every effort to shorten all available structures on the relaxed side of the joint. It seems that by doing this first, we less often have to make the more distant transplantations.

There is excellent authority for transplanting the peroneus longus to the tibialis posticus.

For inversion, the same sort of procedures are adopted on the outer side of the foot. The peroneus brevis is divided and its proximal end fastened to the longus to increase its mechanical advantage. The remaining part of the tendon is used to strengthen the external ligament by fixation above the joint. In severer cases, a wedge is excised from the outer side at the midtarsal joint, as in resistant club-foot in older children, only it is much smaller and is done to produce partial ankylosis.

A more correct procedure, but one with which I have had a limited and not very satisfactory experience, is to transplant the tibialis anticus to the outer side of the tarsus. Galloway has recently pointed out that it is necessary to cut the tendon as long as possible and free it well above the ankle and bring it well downward and forward to the outer side with little angling.

A procedure, advocated by Galli for inversion due to peroneal paralysis, appeals to me as worthy of an early trial. It consists in using both peroneal tendons for fixation by burying them in separate bone troughs made by a gouge on the bone above the external malleolus. The periosteal flaps which have been raised are sutured firmly to and over the tendons with chromic gut. In all cases where the calf muscles are strong, we must be sure that the tendo achillis is not somewhat resisting our efforts and do a tenotomy if such is the case.

When inversion or eversion of the foot is accompanied by lateral tilting of the os calcis, it is a simple and effective procedure to split the tendo achillis, detach one-half with a little shell of bone and pass it behind the attached portion and fasten it to the opposite side of the os calcis. If there is any shortening of the

tendon, it must have been lengthened at a previous operation.

For a marked foot-drop, silk strands are passed under the annular ligament and fastened to the periosteum above and below, and any tendons which seem completely paralyzed are firmly anchored above as accessory ligaments. These cases were most of them advised that arthrodesis of the ankle would probably be necessary later, but those which have returned for observation, while often presenting a moderate amount of relapse, are usually able to walk well enough with a high, rather stiff boot, so that the operation is refused.

The procedure of Lange, advocated and practiced by Dr. Allison, of suspension by silk strands in tendon sheaths, is worthy of serious attention, but I have not given it a fair trial. The lower end of a double strand of heavy braided silk is fastened to a drill hole at the base of the first metatarsal and passed by a special probe through the sheath of the tibialis anticus to a point two or three inches above the ankle where it is cut down on and secured to a drill hole in the tibia.

The same procedure is carried out from the fifth metatarsal via the sheath of the peroneus tertius to the same point on the tibia, or, if varus is marked, to the fibula.

The proper tendon transplantation for drop foot is to bring the peroneus longus and the tibialis posticus to the front of the foot on their respective sides. I hope later to be able to report results of this procedure.

In paralysis of the calf muscles where the heel drops in the calcaneus position, we have relied principally on a cast, then a brace, and, in older children, done Whitman's operation for removal of the astragalus. When done with a freeing and partial denudation of the malleoli, with thorough backward displacement of the foot, it is very satisfactory.

In the future we shall undoubtedly try on a series of cases the anchoring of the tendo achillis to the bone in a right angle position, and the suture of the peronii muscles into the os calcis, as proposed by Galli.

Lengthening of the ham-strings, always under open incision, has been a very common operation with us as part of the program of complete correction of deformity, and on the reconstructive side, the sartorius has been transplanted to the patella. This muscle is seldom paralyzed, and the results have been as good as could be expected when one considers that he is trying to replace a very strong muscle by a relatively weak one. In a few cases where the biceps has also been transplanted to the patella, the result in promoting stability of the knee has been much better, but in voluntary motion, rather disappointing.

The flexion deformity has a strong tendency to recur, and some short knee-splint is usually necessary. It is so easy to provide a satisfactory splint with a joint which can be released in sitting, that we have had little temptation to produce a stiff joint. If arthrodesis of the knee is done for paralysis, it should be practically straight, not slightly flexed. If the knee is hyperextended, it should be remembered that up to 10 degrees this may be a properly conservative effort on the part of Nature to give greater stability. If more than 10 degrees, it should be corrected by shortening of the hamstrings, or by artificial silk ligament, if desired to avoid a brace.

We have never hesitated to freely divide the adductors or the fascia lata or any structures in the thigh which prevented restoration to the anatomic position. For external rotation, the suggestion of G. G. Davis to divide the fascia lata and in internal rotation anchor it behind the great trochanter, seems an excellent procedure.

In the upper extremity, the most useful procedure seems to be the division of the pronator radii teres, if supination is restricted, and of the subcapularis if the arm is bound to the side and rotated in, and the transfer of the flexors of the carpus to the extensors when the wrist is bent anteriorly and the prolongation of the trapezius by silk strands to the deltoid insertion in deltoid paralysis. My personal experience is not large enough to pass any sort of judgment on these procedures.

The production of suspension and partial ankylosis of the shoulder by silk strands is recommended by several well-known authorities who are doubtful of its value in the ankle.

As to massage and exercises, I cannot go into detail, but would warmly recommend to those interested the reading of an article on "Muscle Training," by Miss Wright, in the *Boston Medical and Surgical Journal* of Oct. 24, 1912; and on "Mechanico-Therapeutics in Paralysis," by Cyriax, in the *British Journal of Children's Diseases*, April, 1914.

It may be broadly stated that indiscriminate exercise tends to increase deformity; that the exercises should be directed especially to the weak muscles and should never be carried to the point of marked fatigue; that overstretching must be guarded against when the limbs are released for exercise, and that there seems to be a regenerative influence in the repeated fixing of the attention and will power on a certain motion. Further, that too much massage, and especially too much electricity, injuries rather than aids the weak muscles.

In conclusion, it may be noted:

1. That we are very thorough in the correction of deformity.

2. That we allow months to pass to see how much Nature will help us in increased power in the weak muscles, being very careful in protection apparatus.

3. That we have been rather conservative in our later procedures, probably too much so; that these consist in doing all the comparatively easy things which may help, obvious tendon transplantations, overlapping of ligaments and fasciae, the use of paralyzed tendons, and sometimes silk, for fixation, the excision of skin flaps. That arthrodesis is only occasionally used and always late.

4. That we use no electricity, but have good massage.

5. That by allowing long residence in the hospital, and by efficient visiting nurse service afterward, we make every effort to keep cases under supervision.

Finally, it may be affirmed that no case of deformity following infantile paralysis is too bad to be improved and that we expect to get them on their feet, and that no case is so mild as to be considered cured at the time of discharge from the hospital, or perhaps to ever pass beyond the need of some supervision.

317 Argyle Building.

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DISCUSSION

DR. G. WILSE ROBINSON, Kansas City: I desire to make a few remarks on the prevention of deformities, because, really, deformities should never occur following poliomyelitis. The methods of preventing deformities following poliomyelitis have been improved by Batten of London, who makes the statement that all deformities can positively be prevented.

His method of preventing deformities is by the use of celluloid splints. Briefly, the method is this: As soon as the acute stage of poliomyelitis subsides, from two to four weeks after the onset, a negative cast of the paralyzed limb is made. Then a positive cast of the trunk, if the trunk muscles are involved; and on this positive cast is built a celluloid splint made of a solution of 11 ounces of celluloid and 160 ounces of acetone with 3 ounces of calcium chlorid if necessary to reduce the inflammability of the splint, and by the use of successive layers of gauze, spreading the gauze over the positive cast which has been covered with felt, and painting the celluloid, some twelve to sixteen layers being used. Then the splint is removed and after it has dried hooks are put on so that the cast can be laced on the limb. The cast is then applied and worn day and night, and the patient can be up walking with the aid of a walking apparatus. I have seen patients with both legs paralyzed to such an extent that they were entirely flaccid, walk-

ing with a celluloid splint and walking quite well. These splints should be put on with the foot at a right angle to the tibia and the knee slightly flexed; otherwise, the patient cannot walk. They can be worn day and night for a period of eighteen months to two years, if necessary. They can be by means of the laces, removed daily, for the use of massage, electricity, or for bathing.

The advantage of these splints is this: They are very light, they put no strain on the muscles; are strong enough to support the child; can be applied to the trunk or the arm or whatever part is necessary. Dr. Baten makes the assertion that it is not because of the paralysis that poliomyelitis cases do not walk, but because of the deformity, and if, as he has well proved, the celluloid splint will positively prevent all deformities, then these patients should walk, and he makes the assertion that all of them can be made to walk. Of course, some of them have to walk with braces, as restoration is not so complete as to enable the patient to walk unsupported.

DR. R. M. SCHAUFFLER, Kansas City (closing): The protection suggested by Dr. Robinson is all right, sure, just do it. It is excluded from the subject matter of my paper because that referred, of course, to patients that already had deformities to be corrected, and I expect in almost every case to get them walking. Of course, if you take that much trouble beforehand with them, you ought to be able to keep them walking; but you do not. The idea I had in mind was simply that instead of doing some very complicated procedure that just with your knowledge of anatomy, surgical technic and common sense you would do what was necessary to get the limbs straight, whatever simple procedure was indicated in each case, yet these things are often overlooked. Four of these cases came in yesterday to the Mercy Hospital for routine inspection. I did not send for one of them. Not a single one of these cases was cured and each was in need of some treatment. Yet with the aid of the above procedures they are all playing around, going to school and doing very well. In short, they appeared to be just about normal, yet they were not quite normal, and they do need a little watching for a long time. They are put down as greatly improved patients, and they will stay greatly improved if you keep tab on them and they are very apt to relapse if you do not.

DIAGNOSTIC PROCEDURES IN UROLOGY*

CLARENCE CAPELL, M.D.
KANSAS CITY, MO.

This subject is a big one. Whole volumes are taken up with a single phase, or a single one of its subdivisions. It is our purpose to review the different procedures which are usually employed in urology. We wish to present a bird's-eye view of the different lines of investigation that may be used in this interesting and important field. We will dispose of some of the more familiar steps very briefly and others we will take up more in detail. The object of this paper is to tell something of the different methods that may be used for a diagnosis and the order or sequence in which it is best to employ them. In my reading I have never seen

these different methods considered collectively nor read of them being performed collectively.

These diagnostic procedures may be classed under seven heads:

1. Case history.
2. Physical examination.
3. Urine analysis.
4. Cystoscopy.
5. Ureteral catheterization.
6. Functional kidney tests.
7. Roentgen ray.

These seven procedures may be divided into two groups. The first three, case history, physical examination and urine analysis should be classed together, because they are the ones we can do at our leisure and do repeatedly, for they are accompanied by no pain and are inexpensive and they are the ones with which we are more familiar. We were taught all about them in college. So they will be passed merely by mentioning them, not because they are unimportant, for they are important. They are probably of more importance than those which are to follow. They should be worked out thoroughly in every case as a routine before consultation is sought. Many times a positive diagnosis can be made without going any farther, at least a tentative diagnosis should be made in every case at this point.

The second group, cystoscopy, functional kidney tests, ureteral catheterization and the Roentgen ray are the procedures which are attended with considerable pain or expense and which require special skill in their performance. As a usual thing, these procedures should be employed separately and only when there is some special indication for them depending on the findings made from a thorough study of the first group.

A *cystoscopic examination* may be necessary. The cystoscope is a very important diagnostic instrument in urology. It is easy to learn a smattering of cystoscopy, but it takes practice, experience and instruction to learn to interpret correctly many of the pathological conditions in the bladder.

The cystoscope is useful in determining the condition of the bladder walls, whether or not they are pressed on from without by misplaced organs or new growths. It is useful to tell the different kinds and stages of inflammation and their location, the presence of ulcers, tumors and foreign bodies. An examination of the *ureteral orifices* whether they are pouting, retracted or inflamed and a study of the urinary efflux, whether it is rhythmical or contains pus or blood, is very useful in telling the condition of the kidneys and ureters above. The cystoscope is of use in examining the prostate. With it can be determined the exact condition of affairs. If the operator is gentle and clean and there is no

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acute inflammation present its use is not harmful. The different lobes of the prostate do not always enlarge equally. It may be the right, left or median lobe that is enlarged. The enlargement may protrude more into the rectum than in the bladder and vice versa, or there may be only a median bar. Prostates have been removed leaving a stone necessitating a second operation. Prostates have been operated which were cancerous, doing more harm than good. Both of these could have been avoided by cystoscopy. Knowing exactly how to make the attack will shorten the time of operation, and there is no place in surgery where time is a more important element. Some cystoscopes are so constructed that as they are withdrawn from the bladder the entire posterior and anterior urethra can be examined.

Ureteral catheters are employed to obtain urine from the right and left kidneys separately and by that means to tell which kidney is diseased and if the other is functioning properly. It is impossible to tell which kidney is diseased by clinical symptoms. Pain may be referred through the reno-renal reflex arc from the diseased kidney to the opposite side. One kidney may be almost entirely destroyed by disease without there being any pain; the other kidney, on account of congestion, may become painful and enlarged through compensatory hypertrophy and be palpable. One might suspect that that was the diseased kidney, while in fact it is the one that is doing all the work. The cystoscopic appearance of the ureteral orifices is not entirely dependable. The best evidence is obtained from the analysis of the separate urines themselves. The passing of the catheter may be of service to diagnose strictures and anything that would cause an obstruction of the ureters.

It is difficult to learn to catheterize ureters. Dr. Guiteras says: "It takes several months of daily practice and that even the most expert fail occasionally." The more experience one has the more proficient he becomes and the fewer failures he will have.

Functional kidney tests. There is a certain percentage of cases which die of anuria following any serious operation on the genito-urinary tract. It has been learned that the lower the functional activity of the kidneys the greater is the mortality, and that if there is a preliminary preparation and treatment and the functional activity increased the mortality has been lowered. All careful surgeons make these preliminary investigations and if necessary the proper preparation and treatment.

There are many functional kidney tests. Their very multiplicity is evidence that there is no single one which is satisfactory in every way. Some of the methods used are cryroscopy, elec-

trical conductivity, the phloridzin test, estimation of the output of urea, phenolsulphonephthalein and indigocarmin. Their value depends on the expertness with which they are done. There are two which are probably more practical than the others. They are the phenolsulphonephthalein and the indigocarmin tests. Phenolsulphonephthalein is considered the most delicate, simple and practical of all tests. Six milligrams of the dye dissolved in one c.c. of sterile distilled water given hypodermically in



A simple and convenient apparatus for the injection of the kidney pelvis. Devised by the author.

the standard dose. It is injected hypodermically into the muscle or vein and is eliminated almost entirely by the kidneys. Healthy kidneys start to eliminate more quickly than diseased ones, so it is important to note the time of appearance, which is from three to ten minutes. Quantitatively, the dye is all eliminated in less than three hours, and is eliminated in proportion to the activity or capacity of the kidneys. Just in so far as the kidneys are crippled just in that far will this dye fail to be excreted. This failure is

estimated by colorimetric devices. That is the measuring of the color which the dye gives the urine by comparing it with a solution of known strength. Indigocarmin has very similar qualities to phthalein, only the dose is larger and the time of appearance longer and the time of total elimination much longer, but it has one advantage over phthalein. The phthalein has to be made thoroughly alkaline before it assumes its brilliant red. It comes down through the ureters as an orange color, while the carmin appears at the ureteral orifices in its characteristic bluish-green color, so by merely making a cystoscopic examination and noting the time of appearance and intensity of the dye as it appears at the ureteral orifices an estimate can be made of the relative capacity of the kidneys. This is of value where ureteral catheterization is impossible or thought inadvisable.

It was once thought that the only use of the Roentgen ray in urology was to find stones, but it has now come to have a much greater field of usefulness. By inserting a catheter opaque to the Roentgen ray, stones can be more definitely located in the ureter or kidney pelvis, because in the picture they should lie in the path of the catheter and be thus differentiated from calcified glands. It can by this means be determined if the course of the ureter is normal. The ureter and kidney pelvis may be injected with collargol or argyrol, either of which will cast a good shadow with the Roentgen ray. By such means, that is *pyelography*, the size and course of the ureter can be determined. It can also be told if the kidney pelvis is dilated and the exact position of the kidney be established. When done on the two sides at once malformations such as fused or horseshoe-shaped kidneys can be diagnosed. Formerly when the injection was done with a piston syringe there were some reports of kidney colic and of forcing the fluid into the calices of the kidneys. With the use of the gravity method this is not so likely to occur. We have devised a simple apparatus consisting of a buret, a Y and two needles. The one usually employed consists of a buret and stand for each kidney requiring more assistance and more collargol, which is expensive. It is more difficult to sterilize and is not so portable.

The Roentgen-ray men with their more powerful instruments and more delicate plates and their improved technic in taking the pictures, and their training and ability in the interpretation of the pictures can demonstrate even the very outline of the kidney itself and the presence of any tumor can often be told.

In conclusion there are the seven different lines of investigation. The first group which should be done in every case as a routine and which may be combined with any one or more of the second group as occasion demands. Complaint is made that these methods are too

complicated, too expensive and that many times it is necessary to cover the ground more than once, such as inserting the ureteral catheters for a function test and again for Roentgen-ray work. In order to simplify this we have done some work with Dr. Skinner in his laboratory and have come to the conclusion that if after having worked out the history, physical examination and urine analysis and the case is obscure, it may be best to employ every one of the procedures of the second group in the following manner: Proceed to the Roentgen-ray laboratory and have a large picture taken of the entire kidney area. This picture should be taken before anything is done to obscure any small stone which may be present. Then observing the rules of surgical cleanliness, introduce the cystoscope and thoroughly examine the bladder. Next catheterize the ureters using a Roentgen-ray opaque catheter, then inject an ampoule of phenolsulphonephthalein. The collection of the urine from the functional kidney test should not take long. Dr. Keyes has said that the normal rate of elimination is "1 per cent. from one kidney in one minute." The time of the first appearance of the dye from each kidney should be noted. Some of this same urine could be saved for microscopical examination. Then fill the ureters and kidney pelvis through the catheters with collargol and take another picture. We have learned that all this should take less than an hour. The ground has been pretty thoroughly covered. The instrumentation has been arranged so as to be done at one step or one sitting.

The findings from these different investigations should be written, put with the case history and kept as a record so that it may be studied and reviewed as a whole.

Finally, this has been an attempt to arrange, systematize and condense the different diagnostic procedures so as to give the maximum of useful information with the minimum of instrumentation, expense and inconvenience.

824 Rialto Building.

DISCUSSION

DR. E. G. MARK, Kansas City: The method, or rather the features that are offered by Dr. Capell are interesting, but contain practically nothing new except possibly the phenolsulphonephthalein test and the indigocarmin test, and they are also impracticable for use by the general man, or for the urologist even, unless he has his own Roentgen-ray plant. It is possible, of course, to take up everything with the exception of the Roentgen ray in the office. I heard a minister once get up and talk on comparative theology. That minister discussed the subject not as a minister but as a man and a student of theology; and it is so with urologists; when we consider a case we must consider it not only from the urologic point of view but from the general point of view. We must take a position as far away as possible from the point of view of the urologist and consider it from

the point of view of the general condition. Therefore I would think the physical examination and the urinalysis are two of the greatest features in the outline made by Dr. Capell. The physical examination will often throw great light on the subject in cases where the pain is supposed to be due to prostatic enlargement or to other causes which are apparently obscure.

Relative to urinalysis, it is my opinion that under no circumstances, if we are to do a real urinalysis, one that will be of value in the diagnosis, should the urine brought in by the patient be accepted. Under all circumstances the urine should be catheterized and the catheterized specimen be taken for examination. To illustrate: Just a short time ago a lady came into my office with a specimen of urine which was apparently full of pus, loaded with pus. She had been to her family physician, and he had said she had lots of pus in the urine and had sent her for cystoscopy. I refused to accept the specimen she exhibited, catheterized the bladder, and found the urine absolutely free from infection.

Another point: If we find bladder symptoms and if we find kidney symptoms, and we find on examination of that urine no infection, we are not justified in using the cystoscope. There can be no shadow of a doubt but that cystoscopy is the most valuable urologic means that we have for diagnosis, but all cases should not be cystoscoped. We should first determine whether the case is a case for cystoscopy or instrumentation. If it is a case for cystoscopy, go ahead, but if not it should be let alone. This is especially true in tuberculosis of the kidney where we have found tubercle bacilli present in the catheterized specimen of the urine. Before we cystoscope that patient we should remember that there is no object in cystoscopy except for one thing alone, the diagnosis. If the diagnosis of renal tuberculosis has already been made, there is no object in putting the cystoscope into that bladder. Unless there is a definite reason for doing so, and the only definite reason for doing so is a probable operation, cystoscopy should not be done.

As to functional kidney tests, there can be no question but that the phenolsulphonephthalein is the best kidney test we have. It is practical and it gives more than is possible to be obtained by indigocarmin, which is not so much a kidney test as a colorimetric method for determining the urethral orifice.

These procedures are all old. Urologists have known of their existence for years, and all combined, with the exception of the Roentgen ray, can be used by any man. But I want to emphasize that we are not justified in going ahead and doing cystoscopy until we know that cystoscopy is justified, and that must be determined from catheterized urine. It is far better to make the patient come back two days or three days later, or even three or four times, than to take the urinary specimen brought, put him on the table, get his case history and go ahead with the cystoscope.

DR. O. H. McCANDLESS, Kansas City: There is one thing that I have to say which has no scientific bearing on the papers, but is a thing that will save us a world of time. These patients come in for a Roentgen-ray picture and expect to leave on the evening train; they come in with the abdomen full; they expect to do shopping during the afternoon or attend to some business, and combine the trip for getting their Roentgen-ray work done with getting their business done at the same time. The fact is that a hexamethylenamin tablet, if it is taken without being dissolved, will often show on the plate. It seems like a very little thing to say that these patients should be prepared with a laxative before they come in, but it will save time if it is done. Yet it is never

mentioned; they come in with a full abdomen, which will show on the plate, and they waste their time. They should be given a laxative and remain at the office four hours before any work is done. You will save a world of time to your patients, if you instruct them to come to the office with an abdomen which is flat, absolutely.

DR. C. W. RUSSELL, closing: I want to compliment Dr. Capell on his paper. I am sorry that the focus was not proper on the pictures, as they would have shown up much better, but I know how hard it is to get them focused at times.

I did not want in my paper to have you get the impression that we should do the cystoscopy or the Roentgen-ray work without having gone through all the preliminary work, as noted in the first three articles of Dr. Capell's paper. There is one point that he brought out that I think is very essential, namely: by the use of the cystoscope very frequently an operation may be materially shortened by knowing in advance things that could not otherwise be found out, and the cystoscope for the diagnosis of renal tuberculosis, if you have it on one side only, is the only means by which we can decide whether a case is an operative case or not. That can be determined by means of the cystoscope and the appearance of the ureteral opening in the bladder. As far as the danger of the cystoscope is concerned, I have been fortunate in not having any trouble either with injection of the kidney pelvis or in the simple use of the cystoscope, and I believe that by the use of the cystoscope—of a proper size, so as not to unduly dilate the urethra—and cocainizing the mucous membrane, being careful at the same time about asepsis, there is very little danger, if any, attached to the use of the cystoscope itself.

The point about patients taking a laxative before coming in, I think, should be emphasized more to the general practitioner when the case is to be sent in for a radiographic study. If patients are unable to stay for two or three days, they should see that the bowel is thoroughly emptied before coming in. This would save a great deal of time and expense.

INTERMITTENT HYDRONEPHROSIS*

C. WELLINGTON RUSSELL, M.D.
SPRINGFIELD, MO.

With every year bringing to light a larger and larger percentage of pathologic conditions about the ureter and the uretero-pelvic junction, the justification for using the various instruments of precision in making a diagnosis has given way to an imperative demand, if we expect to save our patients useless operations and ourselves the humility of having to admit a mistaken diagnosis in a much larger percentage of cases than is necessary. Exploratory operations except in emergency cases are never warranted until our means of making a diagnosis have been exhausted. With the cystoscope and Roentgen ray, conditions can be better studied than can the conditions of the tissues of any other part of the system. Every portion of the urethra and bladder-wall both

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in repose and either partially or fully distended may be inspected without blood-clots to obscure the vision. With the direct method some parts of the bladder-wall will not be visible and frequently the ureteral openings cannot be found. Considering the appalling number of lesions that are progressive, more and more impairing the function of the kidney or kidneys and disturbing the mechanics of urination, every week and month adding fresh pathology, making the primary lesion harder and harder to find, the importance of early diagnosis is self-evident.

The text-books on the subject of hydronephrosis describe very accurately the symptoms of a well-advanced case, but are entirely silent on the early symptoms when the kidney is undergoing dilatation up to 40 or 50 c.c., the amount required by the leading surgeons before surgical aid is advised.

Just as we have studied the stomach in the precancerous period, so should we consider the history of this disease while it is in its incipency or beginning dilatation. I believe that hydronephrosis is present as soon as there is sufficient retention to produce pain enough to call attention to the kidney, and the future of that organ depends on an early diagnosis and proper treatment. There are two stages in which we may consider the symptoms of hydronephrosis. In the first the symptoms are purely subjective, and in the second we either constantly or intermittently find a tumor in the loin. When the kidney pelvis has dilated enough to hold 150 c.c.; according to Braasch, it ceases to be of value to its host. Little or no difficulty is experienced in making a diagnosis at this stage and there is no question as to the procedure necessary.

It is in the early stages of the disease during the beginning of dilatation that we see the most violent symptoms. As time goes on the musculature of the pelvis becomes thinner and thinner. The sensitiveness decreases in direct ratio of its ability to produce a muscular spasm. In fact, the gradual lessening of pain is held by some to be a symptom in itself of a dilating kidney pelvis. It is at this period that we will be able to do the most for our patients by a timely diagnosis and the institution of proper methods of relief. It is during this stage that we can expect the kidney to return to normal.

There are two well-defined groups of hydronephrosis. One is caused by a calculus or movable kidney, and in the second group the obstruction is due to a congenital stenosis or valve-like structure at the uretero-pelvic junction, or to the pressure of aberrant blood-vessels. In differentiating between a stone in the kidney substance and one in the uretero-pelvic junction, I wish to call attention to the use of the microscope. In case the concretion

consists of uric acid or urates you will get no shadow with the Roentgen ray. The character of the crystals which predominate, especially if they are of the rarer forms, such as stellate and needle shaped, together with renal epithelia, pus corpuscles and red blood-cells, offer if not positive at least strong evidence of the presence of a stone.

We should be careful in getting a detailed history to get an account of any injury to which the kidney or ureter may have been subjected, and which may have left a scar or cicatrix which marked the beginning of the trouble. A spontaneously displaced kidney may be the sole cause, or the kidney substance may be injured and some blood extravasated which later becomes organized, causing torsion of the ureter. However, without injury to the ureter it is doubtful if it will organize. In Wagner's case the injury to the surrounding tissues caused compression and total occlusion of the ureter, while the ureter itself remained uninjured. A careful determination of the character of the urine, of a disturbance of the mechanics of urination, of the presence or absence of pain, pus, blood or any other pathologic element should be carefully noted and the functional activity of the kidneys determined. After all this we are often at a loss to know what is the matter with our patient, and in many cases with trouble on the right side especially, the appendix has received the blame with no relief of symptoms. It is very important for the surgeon to tell whether he is dealing with the gall-bladder, the appendix, a contracture of the psoas parvus muscle, the crises of tabes, a tubal or ovarian disease, or whether there is some trouble in the genito-urinary tract. These obscure cases can all be cleared up by the use of the cystoscope in the hands of a competent man with or without, as the case may require, the use of the Roentgen ray, and injecting the kidney pelvis.

Blum has recently called attention to five deaths following the injection of the kidney pelvis, four of which occurred in America. I am unable to learn the technic used in the various cases, but by filtering the silver solution and using the gravity method I have found the procedure far from hazardous. In over two thousand cases Braasch has had no mortality.

Shadows produced by shadow-casting catheters defeat the purpose, as they will hold the ureter firmly enough to keep it from showing a kink even if one were present.

By injecting the pelvis of the kidney by the gravity method and using care in asking the patient as to where the pain is located, the answers you receive will not be misleading, as once the patient has the pain of a distended pelvis he will not mistake it for any other pain, so that you may rely on the answer you receive

as practically scientific if not technically so. This point was brought out by Freeman in an article which appeared in *Surgery, Gynecology and Obstetrics*, January, 1910. A case that he had considered a hydronephrosis, on injecting the pelvis complained that her original pain was lower down, and removing the appendix confirmed the diagnosis. By using care and judgment in this procedure, we will save ourselves the embarrassment of being mistaken, or what is more usual or customary, relegating our patients to the rubbish heap of our mistakes and classifying them as neurotic or hysterical individuals.

Intermittent hydronephrosis is one of the least understood of our surgical conditions. The real use of the collargol method of diagnosis is not for advanced cases, but those early cases where there is genuine difficulty in diagnosis. The capacity of the pelvis differs, and until recently anything up to 50 c.c. was considered normal. While it is an absolute impossibility to get the exact capacity of the renal pelvis on account of the organ continually secreting urine, by using a large-sized catheter we can drain most of the urine and inject so that our results are of practical value. By putting the patient through movements conducive to the dislocation of a kidney you frequently will be able to demonstrate the kink in the ureter by means of a skiagraph. Whether you have a partial or total obstruction, intermittent or permanent, makes little difference, as your course of procedure is to remove the cause and institute the proper treatment to avoid recurrence.

Recently anomalous blood-vessels have been recognized as playing an important part in causing kinks. In case of ptosis they make a fixed point about which the kidney makes its excursions. The treatment is indicated as soon as a diagnosis is made and consists of removing the cause of obstruction, be it aberrant blood-vessel, band of adhesions, kink, or other abnormal condition. Nephropexy, except in extreme cases, is all that is required. The main object is to relieve the patient permanently. Heretofore these operations have been followed by short-time relief as were old ventro suspensions of fallen uteri.

Recent investigations point to the fact that most of our infected kidneys occur because the lower pole is able to get rid of its urine only by overflow, and this favors infection in this part of the organ. In quadrupeds the pelvis is the kidneys' lowest point. Man, on assuming the upright position, placed an unusual amount of work on the lower portion of the kidney, and statistics show that nearly all lesions start in this region. With this in view, Fowler conceived the idea of replacing the kidney so that

the lower pole would be properly drained even while man is in the upright position. By doing a muscle operation, making the incision from the costo-vertebral angle to anterior-superior spine of the ilium, splitting the external oblique and transversalis and cutting the sheath of the latissimus dorsi the kidney fat is exposed. The kidney is now extracted from its fossa, and a piece of fascia lata, $\frac{1}{2}$ inch wide and 12 inches long, taken from the patient by an assistant, is placed around the lower pole in such a manner that it will remain *in situ*. The fascia lata is held in place by lacing it in and out of the tunica propria. The upper pole having been anchored by another piece of fascia lata to the erector spini muscles, I now carry the lower pole as high as is desired and put each end of the fascia which is around the lower pole of the kidney through the muscle and its sheath in different places which gives better support and is not so liable to constrict the kidney as the original operation might do. This will correct any kinks in the ureter and afford permanent support for the kidney. While this operation has a somewhat restricted field it perhaps has a distinct place in that it is reasonably safe and fulfils indications for which it was intended most admirably. Any anomalous blood-vessels should, of course, be divided and other pathologic conditions corrected. How much drainage of this kind will effect a cure in infected kidneys I am unable to say, but the importance of the organ merits careful work along this line.

From the above survey I am convinced that intermittent hydronephrosis can be diagnosed as soon as the patient is made aware that something is wrong, and that by the scientific use of the cystoscope and Roentgen ray we can avoid the error made in 35 or 40 per cent. of the right-sided hydronephrosis. Classical cases so called can only be applied to late cases and are valueless for early diagnosis. All previous methods as final procedures are inadequate and untrustworthy, and are to be used only as an indication for radiographic study of the case. By the use of the cystoscope and Roentgen ray a more accurate diagnosis may be made on the urinary tract than on the soft tissues of any other part of the body, and it can be made so plain to the patient that he will understand it as well as the physician. This method is accurate, scientific and extremely practical, open to every little criticism and its findings are beyond dispute. Eisendrath has recently called attention, in a preliminary note of a paper which was presented to the A. M. A. at Atlantic City, to the dangers of the procedure as a result of experiments on dogs, but also states that if the pelvis is not greatly distended no harm results. The general opinion is that the deaths that have occurred have been due to

the unnecessary amount of force used so that the collargol was forced into the circulation causing collargol embolism.

In my opinion, by using the gravity method and elevating the column of collargol solution not over 15 to 18 inches above the renal pelvis, collargol embolism, if it occurs, is unavoidable. However, I am unable to learn of its ever having occurred with this technic being employed. I believe, with the catheter more or less occluding the ureter, the stimuli to the kidney pelvis due to the introduction of a foreign body causes a muscular spasm in a small percentage of cases, and the fluid, unable to make its exit rapidly enough to avoid undue tension is forced in the calices of the kidney, thence into the circulation, even though the pelvis had not yet reached its capacity when the spasm was produced. This spasm would be augmented by the combined help of the abdominal and back muscles.

This method of diagnosis demonstrates the lesions and removes the possibility of mistaking this for an intra-abdominal trouble, and in the light of the present perfection of the cystoscope and skill of radiologists and cystoscopists, no surgeon is justified in operating on the kidney or ureter unless positive diagnosis has been made. Nor is he justified in advising an intra-abdominal operation where the kidney may be involved without having first excluded it positively. Exploratory procedures on the kidney such as laying it open in search of a stone or abscess or for other diagnostic purposes are non-surgical and can only result in mutilation of the organ and destruction of its parenchyma with a large number of secondary hemorrhages which require nephrectomy. Only in cases of ulceration, irritation or contraction of the bladder, making it impossible for a competent cystoscopist to make a satisfactory examination, is the laying open of both kidneys in search of tuberculosis a justifiable procedure. Fortunately, this procedure is so rarely necessary that the exception proves the rule.

Woodruff Building.

DIABETES *

L. C. ROSS, M.D.
SPRINGFIELD, MO.

Diabetes is a pathologic condition of which little is definitely known. It is made manifest by the presence of sugar in the urine. It is divided into diabetes mellitus and diabetes insipidus. Diabetes mellitus is the grave form of the disease and is known simply as diabetes. The mild type is frequently called glycosuria

* Read before the Missouri State Medical Association, Joplin, May 12-14, 1914.

or melituria. It is intermittent in character and appears most frequently among those past middle life, or among women at menopause. Diabetes mellitus occurs more frequently in men of middle age or under than in women; yet while observation seems to establish this fact, neither age nor sex is exempt.

Concerning the pathology of the disease, as before stated, nothing is definitely known. The writer remembers having been present in a quiz class where the following questions and answers were given: The first question asked was, What kind of a disease is diabetes and to what is it due? Among the many and varied answers from the different students were the following: A kidney disease; a liver disease; a disease of the pancreas, grave lesions always being present in the grave form of the disease; a disease due to gummy tumor of the brain; a condition due to a general depreciated condition of metabolism; a disease due to a pathologic change in the region of the vasomotor nerve centers, producing a paresis of those centers, followed by an enlargement of the lumen of the blood-vessels and a quickened hepatic circulation, washing out the glycogen stored in the liver as a heat-producing agent faster than it can be used by the system for the purpose for which it is intended and eliminated by the kidneys as sugar. Hence the erroneous idea so prevalent among the laity that diabetes is a kidney disease.

The theory that diabetes is of nervous origin due to a pathologic condition in the region of the vasomotor nerve centers of the brain seemed at one time to have been more or less prevalent in the mind of the medical profession. The latest investigations, however, seem to land us at sea farther than ever as regards definite pathologic facts, inasmuch as severe traumas of the spinal cord or peripheral nerves also give rise to the disease under certain conditions.

Some authorities attribute the disease to over-activity of the pancreas, giving rise to an excessive flow of pancreatic juice or a quality of pancreatic juice that is abnormally capable of converting starch into sugar. Other authorities claim that deranged hepatic function is the true cause of the disease, and attribute it either to excessive glycogenetic function or the inability of the liver to destroy the glycose converted by the action of the pancreatic juice fast enough.

As to the pathology of diabetes, arising from recent investigations of the thyroid, pituitary or suprarenal secretions, we will leave it for the skilled clinicians and pathologists to discuss, there being few, if any, definite or satisfactory discoveries, notwithstanding the fact that there has been some progress toward a solution of the problem.

It should ever be borne in mind that glucose acts as a severe irritant poison in the blood

irritating every tissue in the human physique and predisposing to inflammatory disease, especially in the lungs and kidneys, with general malnutrition and wasting.

With regard to etiology, diabetes may be divided into hereditary and accidental. Certain exciting causes existing in either case, ranging from chemicals and disease to intemperance and debauchery. Among the exciting causes may be mentioned the excessive use of sweets, starchy foods, spirituous and malt liquors, especially prolonged champagne debauches.

Other exciting causes may be found among certain chemicals, as the bromid of potassium, chloroform and opium, giving rise to the mild type of the disease.

Melituria is also observed during the course of certain diseases, as malaria, typhoid fever, chorea and gout.

Gumma tumor of the brain is said to be frequently attended with the grave form of diabetes. It is also seen in severe traumas of the brain, spinal cord, peripheral nerves, exposure to cold, pregnancy and insanity.

The symptoms and complications are very marked and the physician diagnosing the case should ever bear in mind the irritant poison, glucose, in the blood, as giving rise to a regular train of symptoms which present themselves primarily as neuralgia of the face, accompanied by toothache, spasmodic muscular contractions of the calves of the legs at night, dimness of vision, sometimes assuming the form of double cataract late in the course of the disease. Later on, the patient is obliged to rise frequently at night to void urine, and it is this annoyance that usually induces him to seek the advice of the physician. Later still, the lungs and kidneys, thus continually irritated, present grave symptoms and complications, such as bronchial irritation, asthma, bronchopneumonia and finally winding up with phthisis pulmonalis. As regards the kidneys, they are subjected to the same irritating influence of glucose giving rise to the excessive flow of urine, which is increased by the enormous quantities of water required to satisfy the desiccated tissues made so by the saccharin serum of the blood attracting to itself all the fluids of the body. Hence, the great thirst in diabetes.

As to the complications, the skin should not be forgotten, as the patient is annoyed with itching to a greater or less extent. Boils and carbuncles are common. The latter usually occur in the advanced stage of the disease.

I will not discuss the treatment here, since it will be taken up by someone else on the program. I will say, however, that it is usually dietetic.

HYPERPLASIA OF THE THYMUS; WITH REPORT OF A CASE*

W. H. DOUGLASS, M. D.
BENTON CITY, MO.

The fact that the thymus begins to develop in the third month of fetal life, and reaches the height of that development at the end of about thirty months after birth, from this time undergoing gradual retrograde involution until the age of puberty, places it in a class peculiar and isolated.

Its function must be such that its activity is no longer essential to the economy after two and one-half years of life, or at least in a decreasing degree to puberty. On the other hand, the well-being of the individual depends upon its proper involution.

As to its correlation to the other ductless glands little is known. That there may be a relation, complementary in scope, between the thymus and the testes in the male, seems to be apparent from the investigations of Paton and Henderson, who demonstrated that the removal of the thymus in the young, is followed by a more rapid development of the testes, and castration delays thymic involution.

The thymus lies partly in the neck, and partly in the thorax; extending from the fourth costal cartilage below, to the lower border of the thyroid gland above. It is, normally, about 5 cm. long, 3.75 cm. wide, and 0.6 cm. thick, and weighs 7 to 10 grams. It is made up of a fibrous investing capsule, connective tissue trabeculae, and a medullary portion containing corpuscles of Hassal, small lymphocytes, polymorphs and eosinophil cells. The mass of authority places it in the lymphoid class.

Park,¹ enumerating it with the other organs of internal secretion, has this to say: "Each ductless gland serves its own peculiar purpose, and when disturbed will vary according to the degree of the disturbance. . . . All ductless glands appear to be influenced by the so-called 'epochal periods,' or those characterized by unusual activity such as adolescence, puberty, pregnancy, infancy and senility. Poisons of extraneous origin may also affect or be produced by these secretions. . . . The involution of the thymus, which should be complete when the child is about thirty months old, may take place normally at an early period or as a result of starvation; this latter type of involution being termed 'accidental.' He emphasizes the effect of the peculiar secretion of the thymus on the growing skeleton. "At present it is recognized that the growth of the skeleton is influenced largely both by the pituitary body and the thymus gland. Hyperactivity of the anterior

* Read before the Linton District Medical Society, Mexico, Mo., May 5, 1914.

1. *Pract. Med. Series*, Vol. i, p. 267, 1914.

pituitary body leads to a skeletal overgrowth, the most distinctive features being acromegaly, leontiasis, etc. Underactivity of the pituitary body does not produce any contrasting features as far as is known, but changes of the opposite character certainly are produced by hypoactivity of the thymus. . . . Lesions of the thymus occur early in life, and to its hypoactivity are ascribed achondroplasia, nainism, dwarfing, etc.—conditions which have formerly been ascribed to underactivity of the pituitary body.”

Klose is of the opinion that there is a distinct thymectogenic bone lesion.

I have quoted the above at length, as it seems to represent about all that is known of the function of the thymus gland to-day.

The age at which pathologic changes take place in the thymus gland, with greatest frequency, is during the first five years, and the most common change is hypertrophy or hyperplasia of one of its elements, usually the lymphoid.

In general, it seems that hyperplasia of the lymphoid elements of the thymus is compensatory to the loss of function in some of the other lymphoid structures. Or, any condition of the system causing exhaustion of the lymphoid or myeloid elements brings about an enlargement of the thymus. This may be due to infectious diseases, or to unbalanced or faulty metabolism. The primary cause of hyperplasia is probably due to intoxication in the lymphatic system, as in adenoids and myelogenous diseases. Removal of the thyroid gland, in the past, has caused thymic death by diverting a greater blood-supply to the thymus.

Under the title “Status Thymolymphaticus,” Biering, Goodrich and Theisen² give the results of their studies in 4 cases; all presenting the same symptom-complex. All were of a pasty complexion, presenting a flabby fat overgrowth, enlarged lymph-nodes, hypertrophied tonsils and adenoids, signs of enlarged thymus, and were “pot-bellied.” All were bottle-fed. Three of the four had preliminary deafness; three had seizures of choking or asthma; all were apparently well-nourished, and in all no malady sufficient to cause death was clinically manifest; yet all 4 cases died before a physician arrived, and under very similar circumstances. All were easily excited, all received antitoxin and the post-mortem findings in all cases were identical, viz, lymphoid hyperplasia and enlarged thymus; the thymi weighing 42, 54, 25 and 40 grams respectively.

According to Grawitz and Pott³ the distance from the manubrium sterni to the spine is only 2 cm. An increase to a thickness of 2 cm. to 4 cm. is sufficient to cause serious stenosis, even death. The pressure is aided by the unyielding

walls of the superior strait of the thorax. There seems to be no limit to the size of a hyperplastic thymus. McIntyre⁴ reports a case of thymic death in a child three and one-half months old, in which the thymus filled the greater part of the thorax, displacing the heart and lungs. Death in this instance was due to pressure on the pneumogastric nerves.

That thymic death occurs from compression of the trachea is no longer questioned, though it has been argued by some, particularly Scheele, that the great amount of weight (750 to 1000 grams) necessary to compress the trachea, is an impossible amount, and while the amount of pressure exerted during life has never been ascertained, to my knowledge, the evidences of compression have been found post-mortem in depressed tracheal bands, and during life by the passage of a catheter through a tracheotomy wound.

Hart⁵ says enlargement of the thymus is but one of its manifestations. It seems, in the hyperplastic state, to have a toxic effect on the heart. Adler⁵ concludes from his researches that thymus secretion lowers the tonus of the vasomotor system, and an increase in its secretion necessitates a corresponding increase in adrenal secretion.

From the above we may conclude that there are at least four ways in which a hyperplastic thymus may cause death: (1) compression of the pneumogastric nerves; (2) compression of the trachea; (3) cardiac intoxication, and (4) vasomotor paralysis in case of insufficient adrenal secretion; or, as is more probably the case, by the operation of two or more of these causes.

All symptoms of thymic enlargement are to be recognized by three conditions, namely, tracheal stenosis, or compression, pneumogastric compression and its attendant phenomena, and toxemia. In addition to these, in some cases, there is dulness in the upper sternal region on percussion, and auscultation gives a clear breath sound above and below the compression, in contradistinction to membranous stenosis, and the x-ray may give deeper shading in this region of the thorax; yet all physical signs may be absent.

In membranous stenosis the stridor, dyspnea, rapid pulse, fever, cyanosis etc. are all present, due to the same causes, though different in origin. Of course a bacteriologic examination, or finding the membranous deposit, would settle the diagnosis, but all those who have had experience in treating the deep laryngeal and tracheal forms of membranous stenosis in children know how difficult it is even to bring the laryngeal structures into view in examining these cases.

2. *Amer. Jour. Dis. Children*, August, 1913.

3. *Osler's Modern Med.*, Vol. iv.

4. *British Med. Jour.*, June, 1913.

5. *Virchow's Archives*, ccciv, No. 1.

Therefore, a given case, at this point, may be either membranous or thymic in nature. Eliminate the x-ray and microscope, as in some cases it is impossible to depend on these on account of location and urgency of the case, and the diagnosis resolves itself into a reliance upon the therapeutic test. If that fails we can safely eliminate membranous stenosis, and the inference of thymic enlargement is inevitable. Of course, this may be unscientific, but circumstances sometimes admit of no other solution.

Report of Case.—The patient in this instance was a fat, chunky five and a half year old girl, of the pronounced brunette type. Her family history was negative, except that her father was subject to tonsillitis until recently, when his tonsils were removed. An older brother and younger sister, both healthy, neither having any evidence of adenoid trouble. Her birth was normal in all respects; her infancy without sickness of any consequence; was subject to spasmodic croup (?) and had one or two attacks of follicular tonsillitis; had adenoids, and had several attacks that I diagnosed "intestinal toxemia," in which her fever would reach around 104 F., with a rapid pulse, and at this time she would eliminate large amounts of indican with her urine. Recovery would always follow a thorough cleaning of the intestinal tract. She was the picture of health in every apparent respect.

On the day preceding the attack she played around the yard all day, getting her feet wet, but her mother gave this no thought as it was a common occurrence. She retired as usual that night and her rest was unbroken until about midnight, when her mother heard her cough the characteristic "croupy" cough. She applied the usual remedies with the result that the girl slept fairly well the remainder of the night with the exception of the stridor. She continued about the same during the forenoon, but at 9 o'clock her mother took her temperature and found it to be 105 F. Finding it still above 103 at noon, the parents became alarmed and sent for me. At the time of my arrival (about 3 p. m.) she was lying on a cot, and with the exception of a flushed face, stridor and rapid breathing, appeared to be in no distress.

But little additional information was gained on examination. Cough was not frequent but was very hoarse and croupy; voice weak and whining in quality; inspiratory stridor loudest near the end of inspiration and ending in a "click" or flapping sound; dyspnea and stridor were both aggravated on the least exertion or excitement and in sleep; mouth-breathing constant; at this time there was no cyanosis but the face was flushed a bright red.

Palpation of the neck negative, and nothing could be gained by examining the throat on account of the breathing becoming so much more labored and rapid, lasting one-half to one minute afterward. I now have no doubt that this was due to bending the neck backward during the attempt at examination. Her throat had the appearance of fulness, but was not reddened and no membranous deposit was visible anywhere, but the tonsils were chronically enlarged. I could not by any means bring the larynx into view.

As a further complication, the family stated that before my arrival she had vomited a whitish, tough, round substance, about three-fourths inch long and the size of a little finger in thickness, and that this was followed by a temporary relief.

As a tentative procedure, I gave her an antispasmodic and awaited results, thinking the stenosis may be spasmodic. At the end of a sufficient time I could see no improvement, and acting on seemingly sufficient

data, I gave her all the diphtheritic antitoxin I had with me—2000 units; this was at 4:30 p. m. There was some relief from the dyspnea, the pulse and temperature dropped—the latter to 100; skin became moist and the patient dropped off into a quiet sleep with less stridor than formerly. Encouraged by the apparent improvement, I obtained 20,000 units more antitoxin and continued giving it at six- and eight-hour intervals, until she had taken in all 22,000 units in twenty-three and one-half hours, or up to 3 o'clock Monday afternoon. At this time I had Dr. C. L. Blanks of Mexico with me. Her condition had been alarming since 10 o'clock in the forenoon, and it was now evident that without relief of some kind, death was inevitable. The antitoxin had completely failed after the first dose, but I continued giving it from the fact that all deep diphtheritic processes require enormous amounts, but it became plain now that other forces than diphtheria were at work. Dyspnea was much worse, stridor increased, cyanosis rapidly increasing, face becoming anxious and all features of the case presenting a grave aspect. We had decided that tracheotomy offered the only possible chance of relief, and after gaining the consent of the family, the operation was started as soon as possible. The patient was placed on a table and a few whiffs of chloroform given (about 30 minims) when it became apparent that the administration of a general anesthetic was impossible, and as the initial incision was finished, the chloroform was withdrawn. The subcutaneous fat was abundant, there was no oozing of blood following the cut, her heart was racing, a pulse count impossible. As soon as the cut was extended through the fat the thymus filled the wound completely, and extended as far above and below as could be felt. It was deep purple-red in color, covered with small hematomata from about 2 mm. to 6 or 8 mm. in diameter; the blood-vessels were large and tortuous; it was distinctly lobulated. It filled the space in front of the trachea completely and was so intimately adherent to the structures below that it could not be drawn aside to expose the trachea; the only way the trachea could be reached was by cutting through the gland substance. This was attempted, but on trying to sponge away the blood it would well up and fill the wound on the slightest pressure, rendering a clear operative field impossible. This so delayed the operation that we found we could never reach the trachea and get an opening into it before death ended the scene. We therefore stopped the operation.

We did not have any opportunity to do any blood work or other microscopic investigating, or, after death, an autopsy, that may have thrown light on this obscure condition.

In summing up the case there are several things deserving notice.

1. The thick layer of subcutaneous fat, obliterating the possibility of detecting the presence of the gland in the neck by palpation.
2. The sudden onset—no previous difficulty in breathing and the stenosis coming on as quickly as spasmodic croup.
3. The modification of the voice—not usual in thymic enlargement.
4. Absence of cyanosis until about 5 hours before death.
5. Apparent relief from first dose of antitoxin.
6. Previous attacks of croup probably of thymic origin.

QUININ AND UREA HYDROCHLORID AS A
LOCAL ANESTHETIC IN EXPLORA-
TORY OPERATIONS*

E. D. TWYMAN, M.D.
INDEPENDENCE, MO.

It is possible to make an entirely adequate exploration for gall-stones under local anesthesia with quinin. In many cases it is the most desirable way. Usually it is necessary to inspect the liver, ducts, stomach and pylorus, duodenum, pancreas and appendix and colon.

This seems a heavy demand on the method, but it can be met in the majority of cases. I have found local anesthesia entirely adequate for inspection, and in case the completion of the work requires general anesthesia one has shortened its duration, has the anoci-association of Crile, and has acquired certain knowledge of the requirements of the case. Often, however, the entire operation can be completed under quinin, and the patient be in better condition when returned to bed than he would be eight days after an operation under ether.

There are many patients to whom no one could conscientiously advise an ether anesthesia on account of nephritis, arteriosclerosis, anemia, old age and cardiac lesions.

Nor do I advise it to others, where the work can be done under local anesthesia. Even those who lack the above contra-indications must encounter postoperative nausea, vital depression, lowering of opsonic index and possibility of kidney damage.

As to pain, ether patients suffer as much after consciousness returns as the quinin patients do on the table. The surgeon is usually not with the patient enough afterward to appreciate the difference, but nurses always like local cases best. Two factors make for less pain. First, the quinin effect persists over many hours, affording great comfort; second, one cannot insult the tissues under local anesthesia as is so often done under ether. This needless habit is therefore discarded from one's technic. The result is less shock and less pain. I may venture to say that in our craze for haste we have often been too rough. The utmost gentleness will be cultivated by anyone who does work under local anesthesia.

These conditions together with the element of uncertainty of diagnosis fortify the argument for this method of exploration in the particular region.

The most common reason for exploring the upper abdomen is for gall-stones. All those who frequent clinics know how very often gall-stones are found in addition to the cause assigned for operation; or at least where they

were previously unsuspected. Also how often they are suspected, but made sure of only by demonstration. Nor need one feel ashamed to make his diagnosis, "surgical disease, exploration advised," in cases of a typical trouble in the upper right quadrant. It is done by the best.

Gall-stone cases are common in which colic never occurs. Other symptoms are largely subjective, and subject to error. Even if they are admitted they are susceptible of as many interpretations as there are observers. A surgeon's gall-stone case is often gastritis to an internist. The laboratory as yet gives us no reliable data in this matter. Diagnosis of gall-stones by Roentgen ray is progressing, but has only a small percentage of success. Exploration is our only reliable resource.

Another factor now enters into the situation. We, the surgeons, have decided for exploration; but how is "the man to be cut on" going to look at it. The people do think strongly about these things; and their view ought to be, and must be considered. When exploration is proposed, the first question is: "Will I have to go to sleep and be sick?"

This dread is one of their greatest ones. "Is it necessary?"; "is it safe?"; "will it cure me?" all take a secondary place with a surprising number of people. Their curiosity about their condition is no less than ours, and they understand an honest but intelligent uncertainty, since we of the profession have abandoned the attitude of infalibility and have accepted the humble position of students of disease, earnestly searching for every scrap of information, willing to accept suggestions from even the patient himself.

In eleven cases I opened the abdomen under quinin to inspect the gall-bladder. This inspection was always accomplished. In all these the stomach, liver and exposed part of the duodenum were directly inspected, the ducts and the pancreas palpated. In two the appendix was inspected, in several of the others palpated. In three the stones were removed and the operation completed under local anesthesia, the appendix being taken also in one case. Another case revealed a true hepatoptosis with rotation forward, downward and outward. The liver was replaced after scarifying the upper surface and the gall-bladder used as a big omentous attachment to the abdominal wall—all under local anesthesia. Another case disclosed a well-distributed hepatic carcinoma. The incision was closed under local. In three others which disclosed stones, the operation was completed under ether. The gall-bladder was drained in two of these and removed in the third.

I may briefly add that about sixty other operations have been accomplished under quinin, including appendectomy, hernia, perineorrhaphy, hemorrhoids, fistulae, trachelorrhaphy, cys-

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

tocele, etc., and have been most satisfactory to all concerned.

Technic.—The skin is infiltrated endodermically with quinin and urea hydrochlorid, 4 gr., in sterile water, 1 ounce. The same solution is injected subcutaneously and into the fascia, especially toward the outside and wide at the corners. Either a more dilute quinin solution or novocain, $\frac{1}{2}$ per cent., with adrenalin solution, 2 per cent., in sterile water is infiltrated in a line in the rectus muscle and in its inner sheath. The upper right rectus is split a long distance in nearly its middle portion. About 6 or 7 inches gives good room for all the inspections mentioned. The viscera can be palpated and gently pushed and pulled into view. Some patients tolerate moist gauze packs very readily. Much traction or roughness gives pain and sometimes nausea. Inspection is always satisfactory. If work requiring it develops, ether is given. A further elaboration of the technic can be found in A. E. Hertzler's work on "Local Anesthesia."

In conclusion, let me say that only one thing stands in the way of the general adoption of this method—the trouble to the operator in learning and applying the technic.

DISCUSSION

DR. J. G. SHELDON, Kansas City: Ever since the time I studied in a medical school, I have listened yearly to papers on local anesthesia. What I have gotten out of those papers has perhaps been this, that everybody admitted that there were certain local anesthetics, that these anesthetics injected into the tissues would produce anesthesia, that you could inject any place you could cut, so consequently you could do almost any operation, if you could inject where you cut, with a local anesthesia, theoretically. Also, we will admit that if a certain nerve supplies a certain territory and we paralyze that nerve, the territory will be paralyzed, provided there is not another nerve that goes into the same territory. Now, that is all that I have gotten out of the papers to date, except that it has been the custom of authors in later years to see the disproportion between the very beautiful effects of local anesthesia and the fact that persons doing operations do not use local as much as general anesthetics. There are to my mind two groups of men using local anesthesia; there is the man who is so slow and cumbersome that he has bad results with general anesthesia and he turns to local anesthesia, and there is the other man with whom it is a fad—he has not been to Europe in the last few years. If he went, he would see the slow operators doing slow operations under local anesthesia that they would prefer to do under general anesthesia. So that the explanation and the excuse why certain of the men who are doing surgery are not using local anesthesia and howling about it all the time is that they do not know their anatomy and do not operate carefully, etc.—now, I do not think the surgeon does not know the anatomy, most anybody can learn anatomy, I have not seen any man who actually does surgery that blindly goes in and operates in the dark. But I would say, here is the argument it does not relax your patient, does not give you a good exposure, and consequently you can get better results with general anesthesia.

Now, my position in regard to local anesthesia is this: I think that it has great advantages, which are known history—we have all known them since 1890. I think if there is one mistake made in giving local anesthesia it is this. If you will observe in giving any local anesthetic, say in giving novocain, you will see that the man who cuts immediately after injecting will not get as good results as he does when he waits 20 to 25 minutes. Dr. Hertzler says in his book that novocain lasts only 15 minutes. Novocain will last from an hour to two hours. All you have to do to prove this, is to do just one operation immediately, and do another, waiting 20 to 25 minutes. You can do all these yourself; there is nothing mysterious about it. We do it principally in cases where we believe the anesthetic will be the greater of the two evils. I must confess that we do two-thirds of our stomach carcinomas with local anesthesia, and we do not feel that we want to give that out to the profession as advertisement that we were pulling off a stunt to get operations because we can do local anesthesia, but simply as an application of a principle that is old, that has been used extensively in different parts of the world for years. And when you blame the surgeon who is using general anesthetic more than local, I think you are wrong. It is easier for the patient who is run down with anything seriously wrong with him, to take a little anesthetic and go to sleep and go through with the operation, have it done up nicely and quickly than to spend many minutes with the mental torture that is associated with some of the work in local anesthesia. In this local anesthesia, you will see that it does not work the same every time. We did three yesterday; two of them did beautifully, but the third did not. We could not blame the man who chooses the advantages of local anesthesia, but we do not feel like criticizing the man who uses most of the time general anesthesia and once in a while the local; and I believe the field for local anesthesia will be in the future as it has been in the past and that the men who use it will not do so steadily, but that they will use it only when it is necessary and not as a routine.

DR. E. A. BURKHARDT, Kansas City: I am rather glad that some one comes once in a while and jabs our minds with the idea that local anesthesia is useful in surgery. If I were a patient, I think I would be grateful for that, and if I should have to have an operation and were asked what I would prefer for the work, why I should rather have the local anesthetic, but I would also want the surgeon to have a can of ether alongside of him in case that if the local anesthetic did not do the work he could continue the operation under a general anesthetic. However, the local anesthetic might possibly do the work, and I would not be subjected to the tortures of recovering from a general anesthetic, and there is one great gain in the use of local anesthesia.

DR. E. A. HERTZLER, Kansas City: Inasmuch as I was quoted and misquoted, perhaps you will admit a correction from the Chair. It was said that I stated that novocain would last but 15 or 20 minutes. That is true. I have tried it out on my own anatomy many times. But if you add adrenalin, then the duration is increased from one to three hours ordinarily and sometimes longer.

We have on the Kansas City Blues one long attenuated person by the name of Texas Covington. Now Texas is some person, but he cannot see the plate. Does he understand why his ball does not go over the plate like Christy Mathewson's? I don't know, I am sure. No more can I say why Dr. Sheldon does not have constant results in the use of local anesthesia. Local anesthesia is just as certain as ether, provided a man can call his shots. To do that requires some practice. There is no shadow of doubt as to the posi-

tion of local anesthesia, but the man operating under local anesthesia is doing two men's work and he must have two men's wits. The range of operations that are now being done under local anesthesia has extended enormously, and such men as Harris are now doing a large proportion of their operations under local anesthesia. As a sign of the times, I am able to say that before the year is out there will be four books treating on the use of local anesthetics. The main principles of local anesthesia have now become so established that the subsequent work will be confined largely to detail, and the one important detail which Dr. Twyman has presented is in making the long incision. The fault heretofore in local anesthesia explorations has been in making a short incision. The whole secret is in making a long incision. I know of nothing more gratifying than the difference which one sees, for instance in the repair of umbilical hernia and the repair of a pelvic ptosis in an old woman—where the question of anesthesia is an important one, between the use of local and of general anesthesia. There is almost nothing, too, above the clavicle that cannot be done with greater satisfaction under local than under general anesthesia. The place where I work is an open house, and if there is any doubt about the success of local anesthesia I am sure that any one who desires may come in and see the work as it is being done.

DR. W. A. SHELTON, Closing: I appreciate the liberal discussion on this paper, especially do I appreciate the remarks of my colleague and namesake in Kansas City, Dr. Sheldon, and his reminding us that this idea of local anesthesia is an ancient one. It probably, according to his opinion, dates back to 1846, before ether, as an anesthetic, was established. I appreciate his valuable remarks, but I do not know whether he meant to criticize local anesthesia or not. Of course, local anesthesia has its difficulties, but if the place of operation is carefully infiltrated and the surgeon does not pass beyond that point and area in operating, he will find that his nerves as well as those of his patient are absolutely blocked in the operation. Now, as I stated in my paper, local anesthesia is for the benefit of the patient and not the surgeon. That is the primary object of local anesthesia, to do away with the harmful effects of general anesthesia, and to make more accurate our operation, and if it does take a little more time we are working with a human life and we do not subject our patients to the danger of sudden death from the effects of general anesthesia. We can operate on our patients painlessly and the technic must be studied to do that—there must be a study of cutaneous nerve distribution, etc.—we can operate on them painlessly. It is done primarily for the benefit of the patient and I might say absolutely for the benefit of the patient. It takes a little more time, but it leaves the patient in a condition where we do not have to fear about them dying from embolism or some other remote effect of general anesthesia.

DR. ELMER D. TWYMAN, closing: I think the point was raised that was raised in a previous discussion of this subject, namely: in spite of the fact that it has been used a long time, many men do not know how to use local anesthesia to make a success of it. Specialists will develop in the use of local anesthesia in the same way that specialists have developed in the use of ether. The use of ether by a tyro is not successful. You know how many cases we see on the table receiving ether at the hands of an inexperienced person. You do not care to have one. The same is true of local anesthesia. Men will develop themselves gradually who have more skill than the ordinary, and they will be more justified in using the method than will those

who have not the skill. We are forced to admit that there are cases on which it is highly improper to use the local anesthetic. I recall a visit from Dr. Ferguson, Squibbs' ether expert, a man chosen by them after a number of years' experience in giving ether, to go around and induce surgeons to give ether and show them how to avoid the bad effects of ether—he has come to advise that 8 ounces of olive oil be given by the rectum to every ether patient immediately after the anesthetic, because he recognizes the fact, mentioned by Dr. Shelton, that patients are shocked by the ether administration, and are damaged by the loss of lipoids; and that some means must be taken to restore this loss and raise the patient's opsonic index. I mention this simply to show that even those who sell ether are awake and are studying the subject all they can. They do not say, "It has been done forever, and we have decided that this is the thing and we won't think about it any more. We will just give ether." They go on studying, admit that there are bad effects in general anesthesia, and come to the conclusion that men should study to avoid them.

I did not state, as far as I can recall, that it was a perfect method as yet; I did not say it was new; I did not say that these eleven cases in which I explored the abdomen were the only ones in which I had ever explored the abdomen. I have done some explorations under general anesthesia, in spite of not having been across the water. There is no mystery about it. We certainly do not do it from the standpoint of advertising, and I certainly object to the idea that we torture our patients—I certainly do not. If I felt that my patient was experiencing any pain I would give him a general anesthetic. I have done so many times. In cases of acute nephritis where the indications are for local anesthesia, if the painful point is reached when the appendicidal adhesions are broken up or the gall-bladder is brought up into view, they receive the general anesthetic at that point, for a few minutes.

THE CITY HOSPITAL

One of the obscurely placed news items of the day contains the very important statement that the record made by the St. Louis City Hospital for the fiscal year was far ahead of that of the preceding year.

Deaths for the year just closed were 1,445 in number, as against 1,671 for the preceding year—a difference of 226.

To add to the significance of these figures, it is found that the actual number of cases handled by the city physicians was greater during the past year by 2,209 than during the preceding year—the number for 1912-13 being 14,835, while the number treated in 1913-14 was 17,044.

Those figures showing the amount of work done by the people of the hospital force are stupendous; those showing what substantial gains in efficiency have been made are such that they will prove extremely gratifying to all good citizens.

In connection with these figures it is a pleasure to note that even the sensational press has found few occasions in the comparatively recent past for the publication of unsavory chronicles, based upon developments in the public hospital or upon the complaints of those who have been patients in that institution.

Evidently Hospital Commissioner Shutt and the large number of people who are working under his direction, or in cooperation with him, are performing their duties efficiently and with faithfulness.—*St. Louis Times*.

THE JOURNAL

OF THE

Missouri State Medical Association

Address all Communications to 3525 Pine Street, St. Louis, Mo.

SEPTEMBER, 1914

EDITORIALS

BABY HEALTH CONFERENCE OF PLATTE COUNTY MEDICAL SOCIETY

In conjunction with the Chautauqua meeting of Platte County, August 2 to 9, the Platte County Medical Society conducted a Baby Health Conference that proved one of the most interesting and instructive phases of the gathering. The conference extended through two days of the meeting during which time forty kicking, squirming, laughing little inquisitive mites of humanity between 2 and 24 months of age, were examined. They were a fine collection of children and proved that Platte County can produce classy babies as well as fine hogs and cattle. Everyone in Platte County knew their hogs and cattle were prize winners for have they not been decorated with ribbons and won prize money, in these many years? But as to the babies—O well, there were plenty of them, of course—some 350 registered ones and an unknown number of unregistered—each of which the fond parents declared was the sweetest, best and most perfect baby in the world, but the most important phase of this important industry of raising babies was overlooked by everyone, namely, what imperfections did baby have and how could they be corrected. Every farmer is familiar with the defects in his hogs and cattle and seeks to correct them, in which laudable pursuit he is liberally aided by the government, but the defects and imperfections of the farmer's children have been regarded as matters of providential interposition and as such must, of course, be borne with patient submission.

Now comes the Platte County Medical Society, however, and announces the astonishing view that babies can be made as perfect as hogs and cattle, and set itself to the task of throwing light on this vital subject. They succeeded far beyond their most sanguine expectations. It was the first attempt in the county to bring the babies together, examine them, note their defects and instruct the mothers in the laws of hygiene and sanitation and the methods of preventing and correcting physical imperfections of childhood. The keen interest that

parents exhibited in the scoring of the babies, in lectures on hygiene and sanitation and on the preservation of child life, gives assurance that the infant population of Platte County will have closer attention and more intelligent care for the next twelve months than was ever accorded any rising generation in the county in the past.

The physicians of Platte County were assisted in this work by several physicians from Kansas City.

THE STATE'S RESPONSIBILITY FOR THE CARE OF THE MENTALLY DEFECTIVE

Certain questions constantly recurring, will not down until they are squarely met and satisfactorily answered. Such a question is that of the adequate and scientific care of the mentally defective of our state and the means toward lessening their constant production. The estimate recently made by the superintendent of the Colony for the Feeble-Minded at Marshall, that Missouri has about 16,000 feeble-minded and epileptic within its boundaries, may not be absolutely accurate, but it indicates a state problem which is acutely grave. At Marshall there is room at present to accommodate only about 400 inmates.

Authoritative opinion has been given that 2 per cent. of children of school age are feeble-minded. Such being the case, Kansas City alone must have to-day more than enough to fill the state school for the feeble-minded and epileptic, and St. Louis undoubtedly has many more, while in the state, exclusive of these two cities, a far larger number of such defectives need a special home and proper care with vocational and systematic training.

Not infrequently these unfortunate beings are found in our best families where an inherited taint such as alcohol, tuberculosis, or syphilis, has been the cause. The presence of an imbecile in such a family is a constant limitation and humiliation to both the family and the individual affected; such an individual would be far more comfortable under institutional care.

Another source of the mentally deficient are the unmarried feeble-minded or imbecilic women or men who bring many illegitimate and imbecilic offspring into the world. Of these we have many in our cities. The problem and expense they are to the community and to the state is illustrated in the following case:

"Mollie Langley, a feeble-minded woman about 30 years of age, was first reported to the welfare board at Kansas City in October, 1913, as a woman greatly in need of care. She and one 2-year-old

illegitimate child, Lillie, were living in a shed at the rear of a negro house. The shed was filled with rags which were piled up against a broken stove. They slept on this pile of rags only about 24 inches from the stove. The woman was then pregnant so the ambulance was called and she and Lillie were taken to the hospital. The woman was in the General Hospital from Oct. 22, 1913, until Dec. 23, 1913, at the cost of \$115.32. Lillie was sent to the Institutional Church the day after entering the hospital. She remained there until about Jan. 1, 1914, at an expense of about \$20. The newly born child was sent to St. Anthony's Home and after being kept there for about two months was adopted into a family.

This was the fourth illegitimate child born to this woman. Since Mollie was about 15 years of age she was known as a "silly girl" who eventually became the neighborhood nuisance. She grew from bad to worse until removed from this shed where she had been living more as an animal than a human. June 29, 1914, she was arrested and fined for immoral conduct in a public street; her male companion was also fined.

Her mother, who is much below normal mentally, has been caring for the two illegitimate children. The mother now wants Mollie released from the Woman's Reformatory so she can marry a man who is also very subnormal, but who "will take her off the mother's hands." The girl has been infected and has spread the disease promiscuously. One of her children died of spasms when only a month old. Lillie and Ralph are both very low-grade children yet cannot be classed as imbeciles. While Mollie was in the General Hospital an attempt was made to obtain the mother's consent to an operation to prevent reproduction but the mother, fearing this would disqualify Mollie for marriage, refused her consent."

Such instances impress us with the need of taking these cases, segregating them and giving them opportunity to work, become self-supporting, and also be protected against their own weaknesses and the machinations of corrupt and unprincipled associates.

Such a problem is too great for the individual family; it is likewise impractical for the municipality. It is a state problem and it should be amply provided for by the legislature. Society must be educated to it and our state representatives should be informed of the need and urgency so that early and sufficient provision may be made.

The medical profession from its first-hand knowledge should take a leading part in this movement. It is suggested that each physician, or collectively each County Medical Society, take the subject up with their district representative, making direct appeal. For its accomplishment it will take time; for ample provision it will require a relatively large appropriation, and for practical management such an institution will require thoroughly competent teachers and trainers. But all this will be justified in the humane treatment of this unfortunate group of human society, and by proper and thorough segregation it should do much to lessen the reproduction of their kind.

ATTACK ON PHYSICIAN

Last July press dispatches from Moberly announced the arrest of an ethical physician who has been in practice for the last fifteen years and enjoyed an unspotted reputation for integrity and honesty, which shocked the many friends both professional and lay who have known the doctor for years. The physician was charged with rape by a woman who said the doctor had compelled her to submit to his demands by using force and threatening her with death if she revealed his assault. To those who are not familiar with the later developments in this case, it will be welcome intelligence to know that the charge is regarded by the citizens of Moberly as wholly untrue and without foundation for action. The issuance of the order for the arrest of the doctor, it is believed, was due to a misunderstanding of the charge reported to have been made by the woman and those who prompted her to do so. At any rate, the physician has been admitted to bail and good citizens, including physicians of standing, did not hesitate to sign his bond. We have heard nothing further of the case since the preliminary hearing, which was postponed from time to time, but we learn that the doctor immediately resumed his practice and has been assured by hosts of citizens of their confidence in him.

Of course the physician has no recourse whatsoever upon persons who thus attempt to cast upon a good citizen the shadow of a crime. Failing to prove the crime releases the doctor, to be sure, but the instigator of such dastardly charges could renew the attack if the whim seized her, and possibly under circumstances that might unjustly aid in condemning the unfortunate victim. Such occurrences argue strongly for a law to punish persons who wantonly damage the reputation of good citizens.

PENSIONS FOR THE WORTHY BLIND

When it is stated that a pension is desired for any certain class that class is at once considered helpless and burdensome; in a word, to the average man the term "pension" has a distasteful ring. Pensioning the blind, however, does not mean maintaining a class of useless citizens. A large percentage of those without sight are educated and competent to earn a livelihood; many of them are doing so.

Most of the occupations and professions that the blind can successfully follow require some sighted assistance; those who can pay for this assistance invariably make good. Few pursuits, however, in the beginning return sufficient remuneration to enable a blind person to hire

sighted help in the way of guides or readers. Hence many capable blind in poor circumstances cannot even try to make their way.

These conditions make it evident that small allowances should be granted to the worthy blind, not to support them but to help them support themselves. Philanthropic workers for the sightless have long favored pensioning by the state as one of the best methods of relief, because the help comes directly from the government to the individual and no association or corporation handles the funds so used.

The deserving blind should be thus pensioned because a little financial aid will very greatly assist them to overcome the great handicap of blindness and enable many so afflicted to support themselves and become useful citizens.

If every voter could realize what many persons without sight are capable of doing and what they could accomplish if given a little assistance, this movement would meet with little opposition.

Several of the states pension their worthy blind. Missouri has provided an institution for the education of blind children; now let the state extend to these deserving persons the help which will make them self-supporting adults. The first step to be taken in this direction is amending the state constitution.

Through the efforts of the United Workers for the Blind of Missouri, an association organized for the welfare of the blind, the last legislature unanimously passed a resolution to amend the state constitution so that it would be possible for Missouri to grant pensions to worthy sightless persons. The amendment if passed will not create pensions but simply make it constitutional for the state to grant them when the necessary steps are taken for that purpose.

This measure will appear on the ballot as Amendment No. 7, in the general election in November.

It is hoped that this article will not only acquaint the reader with the pension issue, but will win his cooperation and support for the amendment.

CONDEMNNS ADVERTISING

County societies are taking more active interest in the conduct of their members than at any time in the past. One society has a standing committee with instructions to inquire into circumstances that cause the appearance of any member's name in lay publications in a manner calculated to reflect upon the dignity and traditions of the profession. In this manner members have an opportunity of exculpating themselves from an accusation of collusion with newspaper reporters and others to gain notoriety, while those guilty of insubmission are adequately punished.

One of the disadvantages that membership in the organized profession inflicts upon those inclined to this sort of publicity is an abridgment of lingual liberty. The tendency to brag is doubtless latent in all of us, but in the practice of medicine the bump of self-esteem is the most despised of all the hillocks on the cranial topography. Recently Shelby County Medical Society took action against such self-exploitation and adopted the following resolutions:

WHEREAS, The newspapers of this county have in the past often connected the names of the attending physicians with patients whose illness has been reported, and as this is not in keeping with the profession; and as such, is not news and may be of detriment to both people and the physician.

Resolved, That the editors of the newspapers be requested not to use the name of any regular physician or of any consultant who may be called from a distance, either in reporting any case of sickness or accident, or in other matters of a professional nature.

ATTEND YOUR COUNTY SOCIETY MEETINGS

The dog days have had their little fling, the summer girl has taken her last dash in the spray and old Sol is well on his way to thaw out the hibernating inhabitants of the frozen North, so we of the temperate zone can buckle on the harness for winter work. County society meetings will be in full swing this month and a new lot of papers ought to be forthcoming to entertain and instruct the members on conditions that may confront them from time to time. Several county societies held meetings throughout the year and some of them had their best sessions during the hot months. So really, weather conditions do not form a very valid excuse for absence from these important gatherings. We hope all members will take a new interest in their societies and that the attendance in each will be larger this season than at any in the past.

THE CHICAGO MEDICAL SOCIETY BULLETIN

The official bulletin of the Chicago Medical Society has taken our strictures concerning its advertising insertions very much to heart. We took occasion mildly to remonstrate in our July issue against the foreign custom, more particularly French and German, of inserting advertisements between pages of reading matter. So profoundly has our criticism impressed the management of the Chicago Bulletin that in the September 5 issue, it informs its readers on every other page of some bargain in scientific tests, patent medicine or proprietary prepara-

tion. We may be accused of being too anxious to act as our "brother's keeper"; but there cannot be a great following in the medical profession of Chicago of such methods for raising the wind. How long will the ethical physician stand sponsor for this commercialism?

A NEW STATE ASSOCIATION JOURNAL

The Florida State Medical Association has established a medical journal owned and published by the association. The first number contains thirty-two pages of reading matter and sixteen pages of advertising, the latter censored and in harmony with the rules of the Council on Pharmacy and Chemistry. The new journal presents a very creditable appearance and will undoubtedly further the purposes of organized medicine in Florida. We welcome this publication to the list of journals owned and controlled by the state medical associations. Dr. Graham E. Henson, of Jacksonville, is the editor.

OBITUARY

JAMES F. KEITH, M.D.

Dr. James F. Keith of Sturgeon, graduate Missouri Medical College, 1871, died in a hospital at St. Louis, April 25. Age 65 years.

MARTIN HAYWARD POST, M.D.

Dr. Martin Hayward Post of St. Louis, died suddenly from heart disease on September 1 at Castle Park, Mich. Dr. Post was one of the foremost oculists of the country, a member of many medical societies, and well beloved by a host of friends he had made in his long career as a physician. He was a native of St. Louis where he received his education and graduated from the Washington University Medical Department in 1877. The St. Louis Medical Society will take action upon his death at its next meeting.

RICHARD P. WALKER, M.D.

Dr. R. P. Walker, graduate Kansas City Medical College, 1883, Jefferson Medical College, 1885, died of apoplexy at his home in Belton, Mo., Aug. 26, 1914, aged 54 years. He was a member of the Cass County Medical Society and the Missouri State Medical Association.

URIEL ŠEBREE WRIGHT, M.D.

Dr. U. S. Wright of Fayette, a graduate of the Washington University Medical School, 1871, died at his home August 10. Dr. Wright was a faithful member of the Association for very many years and one of the charter members of the reorganization in 1903. He was elected president of the State Association in 1900. He was 66 years old.

The following resolutions were adopted by Howard County Medical Society:

WHEREAS, The Great Physician has called from earth our brother, Dr. U. S. Wright, and

WHEREAS, We are deprived of his companionship and counsel, we mourn our loss. Yet we recognize the supreme will of Him who doeth all things well. Therefore be it

Resolved, That the Howard County Medical Society, in the death of Dr. Uriel S. Wright, has lost a valued member (a charter member) who was always ready to administer lovingly and tenderly to the sick and relieve the distressed. Further be it

Resolved, That we extend our sympathy to the bereaved wife and children, knowing they will be comforted by his God and by the heritage of the beautiful Christian life of the one who has only gone before; and be it further

Resolved, That a copy of these resolutions be spread on the minutes of this society and a copy be furnished the *Missouri State Medical Association Journal* and the bereaved wife, and the papers of Fayette.

J. J. FULKERSON, M.D.

RESOLUTIONS

WHEREAS, It has been the will of the Almighty God to take from our midst, and from the field of his earthly labors our friend and brother physician, Dr. J. J. Fulkerson, and

WHEREAS, His loss has been keenly felt and deeply deplored by the medical profession and especially by the members of the Lafayette County Medical Society of which he was so long an honored member, therefore be it

Resolved, By the members of the Lafayette County Medical Society that in the death of Dr. J. J. Fulkerson the society has lost a member that was held in the highest esteem by the members of the society and by the profession at large. Dr. Fulkerson was looked on as a physician of the highest sense of honor, one who loved ethical standards and one whose splendid talents were always devoted to the highest and best interest of the profession.

He was large in his conception of ideals, and had the courage of his convictions, and always fought openly and bravely for what he thought to be right.

As a physician he had unusual endowments in physical and mental strength, with a magnetic personality and deep sympathies, he gave of his time and strength and skill in unstinted measure to those who sought his aid. No weather was too severe, no road too long, no night too dark for him, and no patient too humble to enlist his best service. Absolutely without cupidity, with heroic self-sacrifice,

his life reached the ideal inspired by the Great Physician or "When saw we the sick or in prison, and came not unto thee. And the King shall answer and say unto them, Verily I say unto you in as much as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

Resolved, That the county and community in which he lived has lost a valued citizen, one whom the people loved and honored, and one who always took a deep interest and active part in all questions that pertained to good citizenship.

Resolved, That we sincerely sympathize with his children in the loss of a father who was at once both father and mother to them, and whose devotion to them and care and guardianship over them was the most commendable and beautiful trait in a character marked by a life of good works for others.

Resolved, That a copy of these resolutions be sent to the family of Dr. Fulkerson, to the county papers, and be spread on the minutes of the society.

J. C. GOODMAN,
W.M. A. WEBB,
J. A. MANN,
Committee.

NEWS NOTES

FRED REUFFEL, a butcher in St. Louis, was fined \$50 and costs for selling adulterated meat.

DRS. JOHN F. GALLAGHER and E. LEE DORSETT of St. Louis have been appointed assistant police surgeons in that city.

DR. C. M. WOODRUFF of St. Louis, member of the staff of the Health Department, has been sent to New Orleans to study the plague.

THE County Court of Buchanan County voted an appropriation of \$500 for the use of the Antituberculosis Society. The society asked for \$2,500.

THE Commissioner of Health and Sanitation of Joplin is making a thorough fight against the breeding-places of mosquitoes and other disease-carrying insects.

DR. JAMES M. BUCHANAN of Richmond addressed the Ray County Teachers' Association on August 22 on the subject of School Hygiene and Sanitation.

DR. GRANDISON D. ROYSTON of St. Louis has returned from Europe, where he spent a year in clinical work, devoting special attention to obstetrics and gynecology.

DR. W. M. WHITELY, a physician of Webb City, was arrested on August 1 charged with performing a criminal operation. He was released on bond pending trial.

ST. LOUIS BOARD OF HEALTH is conducting a campaign against invasion of the plague. Rats are being captured and examined, and all the river traffic is thoroughly supervised.

DR. CHARLES SANDY, a surgeon at the Emergency Hospital, Kansas City, was quite severely injured while answering a call, by a collision of the motor ambulance with a five-ton motor truck.

J. R. MORRIS of St. Louis was arrested at the instigation of the St. Louis Health Department for practicing medicine without a license. He was fined \$200 in the court of Criminal Correction.

AN energetic young physician is wanted by an established practitioner to take over part of his practice. The opportunity seems a good one in a town of 2,000. Anyone interested may address the editor for further information.

THROUGH the bursting of a hot water tank in the sterilizing room of the University Hospital at Kansas City, one of the nurses was so seriously scalded that it was thought she might die. The building was damaged about \$2,000.

DR. MARC RAY HUGHES of St. Louis and Dr. T. O. Son of Bonne Terre have been appointed members of the State Board of Health in the places of Drs. Ira W. Upshaw and G. B. Schulz, whose terms have expired.

THE Mississippi Valley Conference on Tuberculosis will meet in the Planters Hotel at St. Louis, October 6, 7 and 8. Twenty-five states will be represented by physicians, nurses, social workers and others interested in the war on the great white plague.

DR. HERMAN E. PEARSE of Kansas City delivered an address on Hygiene and Sanitation before a public gathering of the citizens of Lafayette County at Odessa, August 11. The meeting was held under the auspices of the Lafayette County Medical Society.

THE St. Louis Society for Relief and Prevention of Tuberculosis, in conjunction with the Medical Department of St. Louis University, will operate a clinic on lung diseases at the dispensary in St. Mary's Hospital. Dr. A. C. Henske has been appointed physician in charge. The clinic will care for charity patients in a specified district in the southern part of the city.

JOPLIN has put in force a new ordinance requiring that restaurants be kept in sanitary condition. A provision of the ordinance prohibits the use of cracked dishes. One restaurateur laid in a new stock of dishes to meet the requirements of the ordinance.

FRANK H. BOERGER, a chiropractor living in St. Louis, was arrested by the Health Department on a charge of practicing medicine without a license. It is alleged that he examined a patient and diagnosed heart disease. He offered to guarantee a cure within six to eighteen months.

GOVERNOR MAJOR appointed seven Missouri physicians as delegates to the annual meeting of Alienists and Urologists held at Chicago July 14-18. He appointed Drs. F. R. Fry, Charles H. Hughes, of St. Louis; John Punton, A. L. Ludwick, G. Wilse Robinson, of Kansas City; C. R. Woodson of St. Joseph.

NEWSPAPER reports announce that the State Board of Health has resumed official relation with the Census Bureau. It is stated that the Bureau will permit the State Board of Health to name the transcriber and, according to dispatches, the secretary of the Board has appointed James Koch of Knobnoster to perform this service.

DR. DAVID GORDON of Chillicothe, a member of the Livingston County Medical Society, was painfully injured July 31 while returning from a call in the country at 2 o'clock in the morning. The horse he was driving wandered out of the roadway and the doctor together with the horse and buggy was pitched over a 20-foot embankment into a ravine.

ANOTHER success for the Defense Committee was registered when a case against one of our members in Scott County was dismissed by the court on motion of the attorney for the doctor. This indicates that the suit against the doctor was groundless and that the plaintiff did not produce sufficient evidence in court to show that he had a right to prosecute.

DR. A. M. ALDEN, formerly Assistant State Bacteriologist of Iowa, has been appointed Instructor of Bacteriology in the St. Louis University School of Medicine. Dr. George W. Ives has been appointed Director of the Laboratories of Pathology and remains as Assistant Professor in the Department of Pathology in St. Louis University.

A FIRE broke out in the Josephine Hospital at St. Louis last month and caused about \$1,200 damage to the roof of the building, but did not interfere with the running of the hospital in any manner. The patients were removed very promptly during the temporary disturbance and the nurses and attendants did good emergency work before the arrival of the fire department.

DR. FRANK J. LUTZ of St. Louis has been elected a member of the German Association for History of Medicine and the Natural Sciences. Dr. Robert E. Schlueter of St. Louis is also a member of the Association. Other Americans who are members are Drs. James J. Walsh, Frederick Klein, New York; Dr. Harvey Cushing, Boston; Dr. Fielding H. Garrison, Washington.

SCHERING & GLATZ desire to advise the medical profession that not a single one of their medicinal specialties has been increased in price and will not be as long as present supplies last. There is, therefore, absolutely no reason why patients should be made to pay any more than usually for Atophan, Novatophan, Medinal, Urotropin, Brovalol, and the other well-known standard preparations of this old established firm.

PRESS dispatches announce that Dr. A. L. Skoog of Kansas City, a member of the Jackson County Medical Society, has been appointed chief physician at the La Petrie Hospital in Paris. When war was declared between France and Germany the entire staff of the hospital enlisted for field service and Dr. Skoog was placed in temporary charge. He has been in Paris for several months and was studying at La Petrie Hospital, which is a famous institution devoted to nervous and mental diseases.

NEW YORK is to be congratulated that one of the most extensive frauds in that state—the New York Institute of Science, of Rochester, New York—has been suppressed by the United States Government. A vivid account of the investigation conducted by the government is published in *The Journal of the A. M. A.* for August 8, which every member should read so he can inform his patients of the facts. This concern operated in all parts of the country through the mails, and it is said has mulcted the public of \$1,500,000. The postoffice department issued a fraud order against the concern and denied it the use of the mails.

DR. G. O. CUPPAIDGE of Moberly, vice-president of the Missouri State Board of Health, went to New Orleans to study the plague situation so the state board will be in position to

combat any invasion of Missouri by this dreaded disease. Dr. Cuppage placed himself under the direction of Assistant Chief Surgeon Rucker of the United States Public Health Service, who has charge of the campaign in Louisiana. Twenty-five cases of plague have been discovered among the people, and eighty-eight rats have been found with the disease. The government surgeons believe the situation will be controlled without the disease spreading to any serious extent.

THE United Doctors were trundled bag and baggage out of Paris, Mo., where they had advertised their usual unfailing methods of treating disease, "service free of charge" at \$18, \$15 and \$10 per month. These fakers were represented at Paris by a Dr. H. F. Mikel, formerly of Columbia, Mo., a graduate of the State University in 1900, whose license was revoked by the State Board of Health last September for a period of six months. He attempted to bluff the prosecuting attorney into submission, but was very promptly informed that he would be prosecuted if he attempted to gull the people in Paris. The last seen of him was at the railroad station where he waited five hours for the first out-going train.

CONGRESSMAN WILLIAM L. IGOE from the Eleventh District, St. Louis, knows the value of conserving the health of the people and has adopted a method of spreading information among his constituents which is not only good for them, but reflects credit on him. Mr. Igoe has for sometime kept himself informed of the new-born children in his district and sends to the parents a copy of the government pamphlet on the care of the baby, which was prepared for the United States Public Health Service by the American Association for the Study and Prevention of Infant Mortality. This sort of attention to the great problem of health protection is most commendable. Congressman Igoe has always cooperated with the St. Louis Medical Society and the Missouri State Medical Association in their efforts to disseminate information among the people concerning health protection.

GREENE COUNTY MEDICAL SOCIETY held a special session on August 11, to discuss the campaign inaugurated in Springfield to clean up that city. A committee was appointed to cooperate with the Springfield health officials and the following resolutions were adopted:

WHEREAS, Infected and insanitary vaults have been shown by the secretary of the Springfield Public Welfare Association to be the probable cause of much of the typhoid occurring this year in Springfield; and

WHEREAS, Prompt action on the part of the city authorities to correct and prevent the infection of the

insanitary condition of such places may reasonably be expected to reduce the number of cases of sickness and death arising from this source of typhoid in the latter part of the summer and in the early fall; therefore be it

Resolved, That it is the judgment of the board of directors of the Springfield Public Welfare Association that the mayor and council should obtain the passage of such ordinances as may be necessary to meet the following needs:

1. The prompt connection of all vaults, cesspools and septic tanks within the sewer districts, with the sewers.

2. The permitting of only sanitary types of vaults to be constructed outside of sewer districts.

3. The conversion of insanitary vaults outside of sewer districts into sanitary ones within a reasonable period.

4. Necessary rules for the sanitary care of such vaults.

5. Effective official supervision to enforce these rules.

6. Prevention of the accumulation of stable manure and garbage not in fly-proof and modern containers. Be it further

Resolved, That a sufficient number of patrolmen from the police department or of sanitary inspectors should be placed at once for a period of at least sixty days under the authority of the health commissioner, acting in cooperation with the plumbing inspector, to enforce said ordinances, and to complete as soon as practicable the discovery and removal of all vaults, cesspools, etc., within sewer districts.

SINCE publication of New and Nonofficial Remedies, 1914, the following articles have been accepted for inclusion with "N. N. R.":

H. M. Alexander and Co.: Normal Horse Serum; Typhoid Vaccine, Immunizing.

Antiseptic Supply Co.: Causticks; Caustick Applicators; Cupricsticks; Stypsticks; Stypstick Applicators, Alum 75 per cent.

Arlington Chemical Co.: Arlco Urease.

Comar and Cie: Electrargol; Electrargol for Injections, 10 c.c. Ampoules.

Farbwerke Hoechst Co.: Amphotropin; Erepton.

Fairchild Bros. and Foster: Trypsin.

Franco-American Ferment Co.: Lactobacilline Tablets; Lactobacilline Liquide, Culture A; Lactobacilline Liquide, Culture D; Lactobacilline Liquide, Infant Culture; Lactobacilline Glycogene Tablets; Lactobacilline Glycogene Liquide; Lactobacilline Milk Tablets; Lactobacilline Milk Ferment; Lactobacilline Suspension.

Hoffmann-LaRoche Chemical Works: Thiocol; Syrup Thiocol, Roche; Thiocol Tablets.

Hynson, Westcott and Co.: Phenolsulphonephthalein, H. W. and Co.; Phenolsulphonephthalein Ampules, H. W. and Co.; Urease-Dunning.

Merck and Co.: Cerolin.

H. K. Mulford Co.: Acne Serobacterin; Anti-Anthrax Serum, Mulford; Antistreptococcus Serum Scarlatina, Mulford; Coli Serobacterin; Culture of Bulgarian Bacillus, Mulford; Disinfectant Krelos, Mulford; Neisser

Serobacterin; Pneumo Serobacterin; Salicylos; Scarletina Strepto Serobacterin; Staphylo-Serobacterin; Staphylo Acne Serobacterin; Strepto Serobacterin; Typho Serobacterin.

Riedel and Co.: New Bornyval.

Reinschild Chemical Co.: Phenolphthalein Agar.

E. R. Squibb and Sons: Sodium Biphosphate, Squibb; Tetanus Antitoxin, Squibb; Tetanus Antitoxin, Squibb, 5,000 Units.

Hoffmann-LaRoche Chemical Works: Digalen. The Council has voted that the acceptance of Digalen and Digalen Tablets be rescinded and that these products be omitted from New and Nonofficial Remedies. A report explaining this action has been authorized for publication.

Antiseptic Supply Co.: Stypstick Applicators, Alum 75 per cent.

Arlington Chemical Co.: Arlco Urease.

Fougera and Co.: Electrargol for Injection, 10 Cc. Ampules.

Hynson, Westcott and Co.: Urease-Dunning.

H. K. Mulford Co.: Hypodermic Tablets of Emetine Hydrochloride.

Waukesha Health Products Co.: Hepco Flour, Hepco Dodgers, Hepco Grits.

E. Fougera and Co.: Electrargol: At the request of the manufacturer, Comar and Co., Paris, the council has recognized E. Fougera and Co., New York, as the American selling agents for the product. Also in view of information received from Comar and Co. it has modified the New and Nonofficial Remedies description for Electrargol to indicate that this product now contains the equivalent of 0.4 per cent. of metallic silver.

MEMBERSHIP CHANGES, JULY

NEW MEMBERS

Robert L. Hopper, Columbia.

Arthur D. Knabb, Springfield.

Robert McGee King, Centerview.

P. R. Williams, Cape Girardeau.

CHANGE OF ADDRESSES

W. E. Albright, Springfield to Willard.

F. R. De Honey, Kansas City to St. Louis.

Martin G. Fronske, Albuquerque, N. M., to Flagstaff, Ariz.

E. H. Lehman, North Salem to Navarre, Kan.

Wm. F. Taylor, Mexico to Martinsburg.

L. P. Woodworth, New Madrid to Little Rock, Ark.

REINSTATED

G. Mandelaris, St. Louis.

DECEASED

Alonzo V. Thorp, Jamestown.

J. F. Stephenson, Tina.

MEMBERSHIP CHANGES, AUGUST

NEW MEMBERS

Francis G. Bond, Poplar Bluff.

Wm. J. Hux, Essex.

Joseph B. Cowherd, Kansas City.

CHANGES OF ADDRESS

Clifford F. Busard, St. Louis to Robinson, Ill.

J. O. Cooper, St. Louis to Linn.

F. W. Foster, East Lynne to Harrisonville.

Sylvester D. Fox, St. Louis to Kansas City.

W. A. Kendall, Poplar Bluff to Griffville, Ill.

James F. McFadden, St. Louis to Boston, Mass.

Nettie McColl, Hannibal to St. Joseph.

Max W. Myer, St. Louis to Columbia.

Thos. F. Miller, Salem to Kansas City.

H. G. Norton, Kansas City to Wichita, Kan.

Ernst Mitchell, St. Louis to Licking.

G. W. H. Presnel, Kennett to Sikeston.

F. H. Rosebrough, St. Louis to Brownwood, Texas.

Jesse C. Ross, Kahoka to Estherville, Iowa.

Heber Robarts, St. Louis to Belleville, Ill.

Jos. F. Snedec, St. Louis to Pueblo, Colo.

Waldemar Ude, St. Louis to Hermann.

RESIGNED OR DROPPED

Geo. F. Berry, Kansas City.

A. C. Boswell, Kansas City.

T. L. Bradley, Warrensburg.

J. W. Carter, Kansas City.

G. O. Coffin, Kansas City.

John M. Darden, St. Louis.

O. H. Dove, Kansas City.

J. E. Donaldson, Kansas City.

Jacob Block, Kansas City.

W. W. Ellis, Marceline.

B. F. Fortner, Springfield.

W. H. Martin, Kahoka.

J. F. Sawyer, Kansas City.

Samuel R. Stofer, Kansas City.

George B. Thompson, Kansas City.

H. D. McQuade, Kansas City.

Clay E. Mullinax, Mill Grove.

L. T. A. Mallette, Parma.

DECEASED

John M. Singleton, Kansas City.

Adolphus R. McNeill, Winona.

Alva E. Lyle, Butler.

Richard P. Walker, Belton.

Uriel S. Wright, Fayette.

CORRESPONDENCE

NOT NEW TO THEM

To the Editor:—I notice a great many of the so-called standard periodicals are featuring the "twilight sleep," or painless childbirth, as car-

ried out by the ambitious German, Dr. Bernhardt Kronig. These articles are disgusting to every intelligent practitioner in the United States, and I believe every county medical society should denounce by resolutions such advertising.

Yours truly,
G. S. CANNON.

To the Editor:—The American physicians, even in the remote parts of the “Nigger Wool” swamps have employed this “twilight sleep” as long ago as three or four years—so what’s the use of a trip to Freiburg. If they *must* have the twilight sleep, any old doctor can give it to them. I believe reputable medical journals should take a shot at such publications, and at such men as Kronig et al. The American Medical Association *Journal* is entirely too mild in its censure. W. S. HUTTON.

MISCELLANY

POOR FARM

Much has been written by some of the county papers as to the condition of the county poor farm and the way Franklin County provides for its indigent poor. Grand juries have condemned the present system for fifteen years or more and still the court takes no action in the matter. It is useless to mince words about a subject like this, as the whole matter is up to the county court, and the court, and no one else, is responsible for the conditions and the way of taking care of the county poor. We do not mean to say that the court is negligent in the matter, but we do say that the court has the law on its side for the making of a levy which in a few years would afford ample funds to put up a modern poorhouse for Franklin County and remove this subject from further criticism; but the question is, will they do it?—*Union Headlight*.

“MEDICAL GRAFT”

The question of the ethical status of the fee-splitter continues to perturb the state medical associations, as though there could be any question of the wrongfulness of a practice which is, in the last analysis, nothing more than a form of medical graft!

Recently the Kansas State Medical Association refused to go on record as condemning this practice, which has shown no sign of disappearing in later years. It is hard to see how any body of physicians and surgeons could have taken such action. How is it possible to justify or even ignore the action of the surgeon who charges a double fee for performing an operation and who secretly divides that fee with the family physician of the patient?

That it is done every day is admitted by most physicians. Now and then the country practitioner receives a letter from some man just starting in to build up a reputation in surgery, making a plain business proposition.

“You send me your surgical cases and I will give you 25 per cent. of the fee” runs some of these letters. Sometimes the offer is 50 per cent. of the fee. To the young physician, doubtful of his own surgical skill, struggling to build up a practice, in debt and needing equipment for his professional practice, the lure is too strong in many cases.

The result is that he becomes a “case peddler,” sometimes offering his surgical cases to the highest bidder. With implicit faith in his family physician the patient takes it for granted that his interests are being properly guarded. It is the secrecy of the thing which makes it so damnable.

If the fees were divided openly, with the knowledge of the patient, the transaction would lose its immorality. It is the secrecy of the division behind the patient’s back that marks it as the “flagrant fraud” which it has been called. Doubtless some family doctors get less than they are entitled to in handling cases before and after an operation, but that is their business. Their city and county medical associations should be able to take care of this phase of the question.

The leaders of the medical profession and most of the rank and file are trying to break up the practice of fee-splitting in Missouri. The failure of Kansas to grapple with the problem should not discourage them.—*St. Louis Republic*.

A SECTARIAN’S IDEA OF PROGRESS

United States Senator J. H. Gallinger, M.D., of Concord, N. H., a homeopath of the vintage of 1837, drew the fire of *Harper’s Weekly* when he opposed a measure to enable the Secretary of Labor to investigate vocational diseases. Says *Harper’s Weekly*:

“The general deficiency bill was before the Senate and an amendment had been proposed enabling the Secretary of Labor to ‘investigate and report, as far as practicable, upon the mortality and the disability by accident or by disease incident to or resulting from the various occupations in which the wage-earners of the United States are engaged.’ Smoot, who is always jealous of anything that may affect the pockets of manufacturers by compelling them to conserve human life and health, fought the amendment openly to no avail. Then came Gallinger with a motion to strike out the words ‘or by disease.’ Said this eminent Senator:

If we go into an investigation of the question of diseases that may occur from vocational enterprises or labor, it is an endless journey, and I do not think it is practicable. A man has any chronic disease, we will say, and he has been employed in some manufacturing concern. I do not know how on earth any man is wise enough to determine whether that disease was produced by the labor in which he was engaged, or whether it may not have been hereditary. I am very fearful that if we go into this question of compensation for diseases incurred, we shall rue the day when we adopt that course.

Why is it that a man of the Gallinger type is so fearful always that some investigation will prove that human life can be saved at the expense of dollars? The Senate showed its respect for Senator Gallinger’s medical lore by voting to amend the item as he had proposed. So the work of the Department of Labor is to be hampered indefinitely because the distinguished Senator does not think it possible to ascertain whether ‘lead colic’ is hereditary or not.”

SEEING OURSELVES AS A MEDICAL PUBLISHER SEES US

To the public all medical journals are medical journals—to the intelligent, thinking doctor, they are not. The *Medical Standard* is one of those that are not. It is published by George P. Engelhard of Chicago, a gentleman who looks at the medical profession from two angles: one, as a means of making money for Engelhard; another, as something on which to vent his spleen when defending the “patent-medicine” interests. When the “patent-medicine” men’s organization—the Proprietary Association of America—met a few weeks ago in New York at its annual convention, Mr. Engelhard, as usual, was on hand and delivered an address. This address has been reprinted and is being distributed. We give some choice excerpts for the purpose of letting physicians know just what Mr. Engelhard thinks of them:

“Go once to the doctor, and you will go a dozen times. (Applause.) If you are not sick when you go, you are pretty sure to be sick before you get through.”

“What high and holy character attaches to the men of the medical profession that their seal must be on everything pertaining to the health and life of the people before it is safe?”

“It is part of the medical ethics that a consulting physician shall never question the infallibility of the doctor who has called him in. You never find outside the sacred precincts of the medical meeting-room the truth told about the doctors. They will tell the truth about themselves among themselves but they want no hearing by or reform from outside agencies. Anything to deify the medical man, anything to deify the function of the physician.”

“The menace to American life and health to-day, I repeat, is not the proprietary [“patent medicine”] industry . . . but the crowning menace to the health and life of the people of America to-day is incompetency or worse in the regular medical profession. (Applause.)”

And this, gentlemen of the “regular medical profession,” is what George P. Engelhard, publisher of an alleged medical journal, the *Medical Standard*, and of an alleged drug journal, the *Western Druggist*, thinks of you.—*Journal American Medical Association*.

(And it is for the support of such journals that doctors pay good money. We wonder how many members of the Missouri State Medical Association contribute the sinews of war to this enemy of the organization.—Ed.)

EXAMINATION OF CANDIDATES FOR ASSISTANT SURGEON

Boards of commissioned medical officers will be convened to meet at the Bureau of Public Health Service, 3 B Street, S.-E. Washington, D. C., and at the Marine Hospitals of Boston, Stapleton, N. Y., Chicago, St. Louis, New

Orleans, La., and San Francisco, Monday, Oct. 19, 1914, at 10 o'clock a. m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health Service, when applications for examinations at these stations are received in the bureau.

Candidates must be between 23 and 32 years of age, graduates of a reputable medical college, and must furnish testimonials from two responsible persons as to their professional and moral character. Service in hospitals for the insane or experience in the detection of mental diseases will be considered and credit given in the examination. Candidates must have had one year's hospital experience or two year's professional work.

Candidates must be not less than 5 feet, 4 inches, nor more than 6 feet, 2 inches, in height.

The following is the usual order of the examinations: 1. Physical. 2. Oral. 3. Written. 4. Clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate and that they will serve wherever assigned to duty.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists of examination in the various branches of medicine, surgery and hygiene.

The oral examination includes subjects of preliminary education, history, literature and natural sciences.

The clinical examination is conducted at a hospital.

The examination usually covers a period of about ten days.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order. They will receive early appointments.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Assistant surgeons receive \$2,000, passed assistant surgeons \$2,400, surgeons \$3,000, senior surgeons \$3,500, and assistant surgeon generals \$4,000 a year. When quarters are not provided, a commutation at the rate of \$30, \$40 and \$50 a month, according to the grade, is allowed.

All grades receive longevity pay, 10 per cent. in addition to the regular salary for every five years up to 40 per cent. after twenty years' service.

The tenure of office is permanent. Officers traveling under orders are allowed actual expenses.

For invitation to appear before the board of examiners, address Surgeon-General, Public Health Service, Washington, D. C.

ENDOWMENT FOR CLINICAL EDUCATION ON RESEARCH

On July 5, 1914, delivery was made at Baltimore of securities valued at \$1,500,000 presented by the General Education Board to the Medical School of Johns Hopkins University. This gift is to be known as the William H. Welch Endowment for Clinical Education and Research.

The actual transfer of the principal of this fund to Johns Hopkins University signifies that an important and novel feature relating to the gift will have become an accomplished fact, namely, that the organization of the Medical School should be so arranged that the entire income from this fund could be utilized for the support of full-time teaching and research departments of medicine, surgery and pediatrics.

The express proposal made by the trustees of the Johns Hopkins University was that in reorganizing these three departments, professors and their assistants should hold their posts on the condition that they become salaried university officials, and that they accept personally no fees whatever for any medical or surgical services which they might render.

The hospital wards and out-patient departments are to be under the control of the university medical or surgical teachers, but over and above their work in the public wards, the teachers are to be free to render any service required in the interest of humanity and science. They are to be free to see any patient they desire to see.

Patients, however, of the usual private patient type, will pay a reasonable fee to the University, rather than to the professors personally. The time and the energy of the professors are to be fully protected, not only because their salary eliminates financial interest on their part, but because they are themselves to become sole judges as to whether or not particular cases shall or shall not command their personal attention.

In order that the time and energy of the professors thus safeguarded might be properly utilized under favorable conditions, the endowment was made large enough to provide adequate salaries to attract the ablest professors and also to provide them with assistants, well-equipped laboratories, books and other necessary facilities.

Simultaneously with the completion of the reorganization of the Johns Hopkins Medical School in accordance with this new plan, the university trustees have chosen Dr. Theodore C. Janeway, hitherto professor of medicine at Columbia University, to become professor of medicine of the Johns Hopkins Medical School, the position once held by Sir William Osler.

The chair of surgery at Johns Hopkins, under the full-time arrangement, is to be occupied by Dr. William S. Halsted, most of whose surgical career has been passed in the Johns Hopkins Medical School, where, since the establishment of the Johns Hopkins Hospital, Dr. Halsted has been its surgeon-in-chief and professor of surgery.

The chair of pediatrics will be occupied by Dr. John Howland, who was called a year ago from the professorship of pediatrics at Washington University, St. Louis, and appointed physician in charge of the Harriet Lane Home for Invalid Children, this institution being the pediatric clinic of Johns Hopkins Medical School.

Johns Hopkins will become the first medical school to be placed on the full-time basis in all departments. A grant of \$750,000 has been made to Washington University, St. Louis, and of \$500,000 to the Medical School of Yale University, on an understanding that they also reorganize their work so as to put their clinical teaching on a full-time basis.

The full-time scheme is a plan to insure to hospital work and medical teaching the undivided energy of eminent scientists whose efforts might otherwise be distracted by the conflicting demands of private practice and clinical teaching. The full-time scheme is an appeal to the scientific interest and devotion of the clinician, and it is significant that the first three full-time posts created have been filled by men of conspicuous professional standing, all of whom have made great sacrifices in order that they might enjoy ideal conditions for clinical teaching and investigation.

It should become of increasing consequence to the medical profession and to the public that the training of those studying to become doctors should be in charge of the most competent men obtainable devoting their entire time to this work. Greatly increased efficiency and thoroughness should result, to the alleviation of suffering and the cure of disease.

SOCIETY PROCEEDINGS

ATCHINSON COUNTY MEDICAL SOCIETY

The Atchinson County Medical Society met at Tarkio in regular session, July 9. Officers present, Chas. E. Benham, president; Austin McMichael, secretary-treasurer. Members present, J. A. Postlewait, C. M. Waugh, E. P. Taylor and James A. Hunter. Dr. C. L. Evans, counselor of the district, was present as guest of the society.

The meeting was called to order by the president at 10:40 a. m. The minutes of the meeting held at Fairfax, April 9, were read and approved.

This was an open meeting in which we expected the public to take part, especially those interested in

school hygiene and sanitary conditions surrounding the child while attending school. Our school superintendent, Mr. Grebae, was expected to read a paper but owing to absence from the county did not appear.

Dr. E. H. Miller, Liberty, ex-president of the Missouri State Medical Association, was on the program for an address but missed the train and failed to arrive, which was very much regretted by all present. Meeting adjourned until 1:15 p. m.

A communication from the National Red Cross First Aid was read and a committee was ordered appointed as suggested therein.

Music by two young ladies of Tarkio.

Address by A. B. Miller, Tarkio. Subject, "Relation of the Physician to the Community."

Paper by Dr. J. A. Postlewait, Tarkio. Subject, "Prevention of Disease." Discussion opened by Dr. Evans, followed by society members, Dr. Postlewait closing.

General discussion on contagious diseases was opened by Dr. Hunter, followed by Drs. Postlewait and Evans.

It was moved and carried that Dr. Postlewait's paper be sent to the *Journal of the Missouri State Medical Association* for publication, but owing to the Doctor's modesty he has not furnished the manuscript yet.

No further business appearing, the meeting adjourned to meet at Rockport, Oct. 8, 1914.

AUSTIN McMICHAEL, M.D., Secretary.

CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society met in Mokane, July 9, at 11:30 at the M. K. & T. Hotel. There were present Drs. Major, McCall, Blackburn, Owen, McCubbin, and Yates of Fulton; Dr. Hirsch of Shamrock; Dr. Hill of Bachelor; and Drs. Williamson, Nichols, and Parmer of Mokane.

After organization, reading of minutes and routine business, the members were served an excellent dinner at the hotel. After dinner the scientific program was taken up.

Dr. Hirsch read a valuable paper on "Placenta Praevia," reporting several cases. A general discussion of the subject followed the reading of the paper.

Dr. McCall reported an interesting case of renal calculi, giving a history of the case existing before operation. He also described the operation and gave an account of the successful result. A general discussion of the subject followed.

Drs. Williamson and Nichols were appointed a committee to investigate alleged violations of the medical practice law by irregular practitioners and report to the society.

Adjourned to meet in Fulton in August.

MARTIN YATES, M.D., Secretary.

The Callaway County Medical Society held its regular meeting in Fulton, August 13, 1914, at 11 a. m. The program consisted of the following papers:

"Conjunctivitis," by Dr. J. B. McCubbin; "Administration of Typhoid Serum as a Prophylactic," by Dr. R. L. Gleason; "Constipation," by Dr. C. B. Nichols. Dr. D. C. Gilman (title not given).

MARTIN YATES, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The Cape Girardeau County Medical Society met at Cape Girardeau, July 13, the president, Dr. W. K. Statler in the chair.

At this meeting Dr. P. R. Williams of Cape Girardeau was duly elected to membership in the society.

Dr. Porterfield read an excellent paper on "Affections of the Gall-Bladder and Biliary Tract." He showed a number of colored drawings, beautifully illustrating this region.

Dr. Howard gave a talk on "The Dead Beat and How to Handle Him." Discussion opened by Dr. Ellis.

Dr. Statler read a fine paper on "Medical Economics and Safeguarding Its Future." Discussion opened by Dr. Hope.

The attendance has been fair and members active in taking part in the programs. The hot weather has kept some of our out-of-town members away.

W. E. YOUNT, M.D., Secretary.

CARTER-SHANNON COUNTY MEDICAL SOCIETY

The Carter-Shannon County Medical Society met in regular session in the office of Dr. T. W. Cotton at Van Buren, April 17, 1914, with President Dr. A. R. McNeal in the chair.

The following subjects were presented and discussed by the members: "Typhoid Fever," by Dr. McNeal; "Asthma," by Dr. T. W. Cotton; "Rheumatism," by Dr. P. D. Gum; "Pneumonia," by Dr. Frank Hyde.

Drs. T. W. Cotton and Frank Hyde were appointed as county committeemen of health and public instruction.

The meeting was well enjoyed by all, and was a success from every point of view.

J. A. CHILTON, M.D., Secretary.

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met at Harrisonville, August 13. The following members and visitors were present:

Drs. A. R. Elder, D. S. Long, M. P. Overholser, R. D. Ramey, J. S. Triplett, H. S. Crawford, H. E. Pearse of Kansas City, D. E. Shy of Knobnoster and O. B. Hall of Warrensburg. It was a great disappointment to the members and visitors that no one on the program was present. This same thing occurred at the last meeting, and it is a detriment to the society and a hardship to the secretary when the members neglect their duty in this manner.

Dr. O. B. Hall of Warrensburg, secretary of the Johnson County Medical Society, read a very interesting paper on "Medical Expert Testimony," which was freely discussed by all present. The matter of a reform along the suggestions of the author was taken up and a committee appointed to report at the next meeting.

Dr. Herman E. Pearse of Kansas City reported a very rare and interesting case of "Fibrous Arthritis of the Knee- and Ankle-Joints of Both Legs," following a compound fracture of both tibias.

We expect to have some good clinics at the next meeting and hope the members will turn out and make up for their negligence of the last two meetings.

H. S. CRAWFORD, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met at 2 p. m., July 3, with President Payne in the chair.

Present were Drs. Wright, Lewis, Payne, Bonham, Moore, Kitchen and Watts. Visitors present, Drs. A. R. McComas, councilor, Sturgeon; R. A. Woods, Clark. Minutes of the June meeting were read and approved.

Dr. W. B. Kitchen gave us a very clear, concise and full description of appendicitis, its history, causes, symptoms and the complications with the liver and other organs often found involved. So thorough was his presentation that the members were highly edified and pleased and could add nothing. Our visitor, Dr. McComas, endorsed the views of Dr. Kitchen and we had a very fine session of two hours.

Drs. Temple and Smith not being present, were continued on the program, their subjects being "Tonsillitis" and "Adenoids." Dr. J. B. Fleet, New Franklin, was appointed to give us a talk on "Diseases and Injuries of the Skull."

Our councilor, Dr. McComas, gave us much information on State and County Associations, the unit rule, the importance of steering clear of quacks and charlatans and meeting regularly with an interesting program for meetings.

The society adjourned to meet Friday, August 7, at 2 p. m. C. W. WATTS, M.D., *Secretary*.

JOHNSON COUNTY MEDICAL SOCIETY

Tuesday afternoon, July 21, the Johnson County Medical Society met in regular session in the circuit court room at the courthouse. It was one of the most interesting meetings in the history of the society. The "to-the-point" speeches were enjoyed by outsiders present as well as by doctors.

Dr. E. J. Goodwin of St. Louis, secretary of the Missouri State Medical Association, met with the society, and made one of the best talks ever heard by the society. It was full of practical, helpful thoughts from beginning to end and received hearty applause. Dr. H. S. Crawford of Harrisonville, counsellor of the Fifteenth District, was also present and made a most interesting appeal to the doctors to become more closely affiliated and lay aside all personal prejudice, thereby working for one another's interests.

It was unanimously decided to hold the county society meeting once each month instead of quarterly as heretofore. This is another evidence of the new life the society has taken on.

The committee has under consideration a measure for changing the place of meeting to some permanent quarters. They are looking up the possibility of renting one of several rooms at which they have been looking, thereby having a permanent location, one they can call their home.

At the close of the meeting Dr. King of Centerview was received into the society by acclamation.

The physicians from out of town in attendance were H. Park and Emery Shy of Knobnoster, W. G. Thompson and S. A. Murray of Holden and Dr. Sheffer of Latour.

KNOX COUNTY MEDICAL SOCIETY

The Knox County Medical Society met at Novelty, on the afternoon of July 6 in the Odd Fellows Hall.

Members present: Drs. J. W. Haden of Plevna; B. F. Humphrey and A. D. Gray of Hurdland; E. H. Bullock, G. S. Brown and H. J. Jurgens of Edina, and in addition the following visitors: Drs. E. N. Gerard of Leonard; J. W. Vandolah of Edina; A. C. Hangar of Cherry Box and Drs. Sherlock and Andrew Arnett of Novelty.

Papers were read by the following: "Etiology of Diarrhea," by Dr. J. W. Haden; "Treatment of Diarrhea," by Dr. B. F. Humphrey; "Immunity," by Dr. George S. Brown; "Fractures of Shoulder Girdle," by Dr. H. J. Jurgens.

In response to the appeal of the secretary many of the members as well as visitors brought clinical material which was examined by all and a report made of each case by gentlemen appointed by the chair. This clinical material comprised tubercular pharyngitis and adenitis, emphysema, varicose veins and bronchial asthma.

All the papers as well as the clinics were thoroughly discussed, making this the most enjoyable as well as the most profitable meeting in the history of the society.

Many of the visitors signified their willingness to join the society and accordingly the secretary will send them application blanks at an early date.

The secretary reported that he had been in communication with Scotland County Medical Society and that a joint meeting had been arranged, the meeting to be held at Baring on Monday, August 3.

Dr. Sherlock, in behalf of the local physicians, thanked the society for meeting in Novelty and for providing such an excellent program.

The president, in behalf of the society, thanked the local physicians for their cooperation in making this the best meeting ever held in Knox County.

The meeting adjourned until the first Monday in August. H. J. JURGENS, M.D., *Secretary*.

LAFAYETTE COUNTY MEDICAL SOCIETY

A meeting of the Lafayette County Medical Society was held at Higginville, June 9, 1914. There were fifteen members present, with Dr. A. J. Chalkley presiding. Those present were: Drs. Braecklein, Webb, Ott, Schneider, Schreiman, Oetting, Mills, Mackey, Dawson, George Williams, Johnston, Ryland, Chalkley, Butler and Cope.

After reading the minutes of the previous meetings and some clinical cases had been reported, Dr. Ryland read a paper on "Sanitation," which proved very interesting and was discussed by every member present. This is a subject that is being discussed by the public in the towns of this county lately and proved to be a very interesting topic.

Dr. Mackey read a paper on "Cancer of the Stomach." Dr. Mackey showed a broad knowledge of his subject and read a thorough and complete paper. It was discussed by all members present who had had any experience with the disease.

Dr. Oetting read a short and concise report of a case of eclampsia. The case was well reported and stimulated a general discussion on the subject. The discussion brought out the fact that these attacks have no positive warning symptoms and that we are not agreed as to the cause of eclampsia.

Drs. Ryland and Cope made short reports on the state meeting at Joplin.

A special committee was appointed to arrange a tentative program for the next meeting at Odessa. The committee is composed of Drs. Mackey, Williams and Dawson.

The July meeting is to be in Lexington and all the members were invited by the Lexington doctors to remain in Lexington for dinner as their guests and attend the open session for the public, which will be held in the evening after the regular session in the afternoon.

Society adjourned to meet at Lexington, July 14, 1914.

J. Q. COPE, M.D., *Secretary*.

The Lafayette County Medical Association met in Odessa, Tuesday, August 11. It was what might be termed a "Red Letter Day" for the Association, for the meeting was held at popular Lake Venita.

In the afternoon the doctors and their families enjoyed boating, bathing and fishing—in fact, one of those good times that Lake Venita visitors can have so easily. At 6:30 lunch was served in the pavilion and most heartily enjoyed. In the evening the general public availed themselves of the cordial invitation extended them and went to the lake to enjoy a splendid program of music and speaking.

The Odessa band, who furnished the music, opened the program. The introductory address was made by Rev. Wm. B. Snyder and was splendid. Reverend Snyder is a pleasing speaker and is always listened to with pleasure.

Prof. Homer T. Phillips, county superintendent of public schools, followed Reverend Snyder, and spoke of the need of better housing of schoolchildren, the necessity of improvement in sanitary surroundings, and medical inspection of schoolchildren. Professor Phillips spoke from a personal knowledge of conditions as they should be, and his remarks were full of helpful suggestions.

Dr. Herman E. Pearse of Kansas City next addressed the meeting on child welfare and public sanitation. His address was very entertaining as well as highly instructive, and if his advice is followed, Odessa and community will be materially benefited thereby.

About 250 people attended the meeting and enjoyed the program with the medical association.

J. Q. COPE, M.D., Secretary.

POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at Aldrich on June 11, 1914. The meeting was called to order by Dr. R. Lee Russell, president. The following members were present: Drs. R. Lee Russell, C. H. Brown, L. L. Hunt, A. J. McLaughlin, W. T. Meyers, C. N. Hahn, John W. Coy, A. J. Stufflebam, W. G. Drake, J. E. Loanman and J. F. Roberts; also Drs. C. E. Coffelt, C. W. Russell, H. A. Lowe and J. E. Dewey, honorary members from the Greene County Medical Society.

Dr. D. E. Hammondtree's application for membership was received and referred to Board of Censors.

Dr. C. N. Hahn presented an interesting case which, on examination by Drs. Coffelt and Brown, was diagnosed as probable osteosarcoma of the superior maxilla. The case was discussed by Drs. Coffelt, Russell and McLaughlin.

The regular program was taken up and Dr. J. E. Dewey of Springfield read a very interesting paper on "Prostatic Disease," which was discussed by the members of the society.

Dr. H. A. Lowe read a very excellent paper on "Factors Entering into Acute Intestinal Obstruction," which was discussed by Drs. C. W. Russell, A. J. Stufflebam and J. E. Dewey.

Dr. C. N. Hahn reported a case of hour-glass contraction and Drs. Stufflebam and Brown reported cases of injury to the head with probable fracture at the base of the skull. These cases were discussed by the members.

Dr. Hunt gave the methods of urinalysis ordinarily followed by himself in cases requiring the same, both chemical and microscopic.

Dr. J. E. Loanman read a paper on "Morphinism," which excited remarks from several present.

On motion Dr. C. E. Coffelt and Dr. J. E. Dewey of Springfield were elected honorary members of the society.

After the transaction of some miscellaneous business it was moved and carried that the thanks of the society be extended to Drs. McLaughlin and Myers of Aldrich for the splendid entertainment and dinner for the members of the society.

On motion the society adjourned to meet at Bolivar on the second Tuesday in September.

J. F. ROBERTS, M.D., Secretary.

RALLS COUNTY MEDICAL SOCIETY

Ralls County Medical Society held its midsummer session at Spaulding Spring, August 27. A very interesting program was arranged and a good time enjoyed by all who attended. Following is the program:

"Eclampsia," by Dr. T. Guy Hetherlin, Louisiana; "Bacterin Treatment of Disease," by Dr. H. B. Norton, Center; "Vaccine and Serum Therapy as Rational Treatment of Disease," by Dr. Robt. C. Strode, Mexico; "Care of the Special Senses of Children," by Dr. R. M. Winn, Hannibal; "The Doctor—from the Layman's Standpoint," by Joe Burnett, New London; "The Mutual Relation That Should Exist Between the Profession and the Public," by Dr. J. W. Dreyfus, Louisiana; "The Duffield Method of Resuscitation of the New-Born: This Method is Neglected by the Text-Books," by Dr. Guy Hetherlin, Louisiana; "Report of Three Inoperable Cases of Cancer of Uterus; Unsuspected by the Patient and Her Family and Discovered Only When the Doctor Was Called," by Dr. T. J. Downing, New London; "Some Remarks as to Palliative Effects of Hot and Compressed Air," by Dr. Thos. Chowning, Hannibal.

SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session at the courthouse at 2:30 p. m., July 21, President Tuttle in the chair.

Following the reading and approval of the minutes of the preceding meeting, Dr. John R. Hall of Napton reported for the constitution and by-laws committee and read a proposed constitution and by-laws which conformed with those of the Missouri State Medical Association. These were read and adopted article by article with such changes as were deemed expedient.

In the regular manner it was decided to instruct the constitution and by-laws committee to have the constitution and by-laws printed in pamphlet form, together with a brief history of the medical society in Saline county.

Censors were elected, resulting in the following: To serve until the next regular election, Dr. L. I. Shuck of Nelson; to serve one year from next regular election, Dr. John R. Hall of Napton; to serve two years from next regular election, Dr. G. A. Aiken of Malta Bend.

The president appointed Drs. A. F. Brown and J. E. Connell to act with the secretary as a program committee during the remainder of the present year.

Dr. M. S. McGuire being absent and the time being limited, no scientific program was given. Dr. McGuire's paper on "Diarrhea in Children" was held until the next meeting.

On motion the society adjourned to meet August 18, 1914.

G. A. AIKEN, M.D., Secretary.

ST. JOSEPH-BUCHANAN-ANDREW COUNTY MEDICAL SOCIETY

The regular meeting of the St. Joseph-Buchanan-Andrew County Medical Society was held at the Hotel Robidoux, Wednesday evening, June 17, Vice-President F. H. Ladd, in the chair. There were thirty-five members present.

As this was the last meeting of the society until September, it was given in the nature of a fraternal dinner in the banquet room in the above hotel at 6:30 p. m. The guest of the evening was Dr. Granville N. Ryan of Des Moines, who entertained the society with a paper on "Medical Aspects of European Travel and Study Tour." The paper was delightfully entertaining and appreciated by the members present.

Previous to the reading of the paper of Dr. Ryan, a short business session was held during which the following matter was disposed of: A communication from Judge Randolph giving his opinion that this society having been regularly incorporated having a certificate of incorporation from the Secretary of State and a decree of incorporation from the circuit court was and is duly and completely incorporated, and has all the power conferred by law on such corporation and that they were free to go ahead and prosecute quacks without any individual responsibility.

On motion of Dr. Fassett, seconded by Dr. Elam, the secretary was instructed to send Dr. O. B. Campbell a letter of regret that he could not be present at this meeting. The secretary was also instructed to convey to Mr. Kinnison a vote of thanks for one hundred cigars contributed to the entertainment of the evening.

Dr. Charles Greenburg read a paper on "Early Diagnosis of Tuberculosis." This was discussed by the following members: Drs. Kenney, Willman, Gregory, Ladd, Stamey, Farber and Ryan.

Dr. W. A. Montgomery of Chicago, was extended the privilege of the floor and gave the society the benefit of his experience in suppressing quack doctors in Chicago.

There being no further business before the society the meeting adjourned.

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

WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society met in regular quarterly session, August 13, at the courthouse in Hartville, with the following members in attendance:

Drs. A. J. Farmer and B. E. Latimer of Hartville, Drs. R. M. Rogers and J. A. Fuson of Mansfield, Drs. R. A. Ryan and L. T. VanNoy of Norwood, Drs. H. U. Daugherty, E. C. Wittner and A. C. Ames of Mountain Grove, and Dr. E. L. Evans of Manes. Dr. Rogers, the president, opened the meeting with a very timely address. The secretary not being present, Dr. Ames was appointed secretary pro tem.

Dr. D. M. Smith of Hartville, an aged physician not in active practice, was elected as an honorary member of the society. Drs. S. V. Davis of Ozark County and Drs. C. W. Burdett and R. M. Norman of Douglas County were elected to membership as there are too few physicians in their counties to maintain an organization.

Dr. Evans presented his daughter for an examination for an obscure trouble, which was thought to be of the pancreas.

Dr. Farmer presented a man with a very sensitive scar where a tumor had been removed.

Dr. A. C. Ames read a paper on "Summer Diarrheas of Children," and Dr. VanNoy read one on "Early Diagnosis and Treatment of Tuberculosis," both of which were discussed by all present.

The society discussed the question of prosecuting unqualified persons who attempt to deceive the people through fraudulent claims of ability to treat disease. Steps will be taken to begin this work at once.

The society adjourned to meet at Mountain Grove in November for the annual election of officers.

A. C. AMES, M.D., *Secretary pro tem.*

THE TRUTH ABOUT MEDICINES

PROPAGANDA FOR REFORM

ADMINISTRATION OF FRUIT ACIDS.—The administration of the salts of ordinary fruit acids is useful whenever it is desired to increase the alkalinity of the blood and diminish the acidity of the urine. Important investigations indicate, however, that it is scarcely feasible to produce any very marked effect on the alkalinity of the blood in this manner. If the physician believes that the alkalinity of the blood is an important factor in the recovery from gout and rheumatism, the administration of the salts of fruit acids is appropriate. Citrates should be preferred to tartrates, for the latter are imperfectly converted to carbonates and, when given in large quantities, may cause irritation of the kidneys (*Jour. A. M. A.*, Aug. 1, 1914, p. 420).

VERACOLATE, MARCY & Co.—Veracolate is a proprietary said to consist of the salts of the bile acids, sodium glycolate and sodium taurocholate, with cascara and phenolphthalein. While bile salts are said to increase the secretion of bile, it is doubtful whether this increase in the secretion of bile is of value in the treatment of gall-bladder affections. There is no occasion for the use of bile salts combined with fixed quantities of cathartics, which should be added only when they are needed. The advertising claims for Veracolate show a tendency to extravagant statements (*Jour. A. M. A.*, Aug. 1, 1914, p. 420).

HECTINE.—Hectine, referred to in newspapers as a treatment for hay-fever, is a French proprietary, stated to have a composition similar to that of atoxyl. If its composition is in accordance with the claims its action is probably no better than that of atoxyl. Arsenic is used in the treatment of hay-fever with success in some cases (*Jour. A. M. A.*, Aug. 8, 1914, p. 502).

TOXICITY OF CAMPHOR.—A case is reported in which an 18-months-old child was given, after a meal, a teaspoonful of camphorated oil (linimentum camphorae) by mistake. While this dose must have contained about 15 grains of camphor, no untoward symptoms were observed (*Jour. A. M. A.*, Aug. 15, 1914, p. 579).

ASSIMILATION OF CALCIUM PHOSPHATE.—Extensive experiments have demonstrated the availability of calcium phosphate for the bone formation of growing infants. This is a further proof of the power of the human organism to utilize inorganic substances (*Jour. A. M. A.*, Aug. 15, 1914, p. 581).

POISONING BY BORIC ACID DRESSING.—While wet boric acid dressings are harmless, this is not true of dry, powdered or crystallized boric acid. Alarming symptoms resulted from the application of dry boric acid to wounds caused by a burn (*Jour. A. M. A.*, Aug. 15, 1914, p. 593).

PoDoLax.—A report from the A. M. A. Chemical Laboratory showed that PoDoLax, claimed to be "Podophyllin with the Gripe taken out," is a phenolphthalein nostrum. PoDoLax is being extensively advertised by the E. E. Sutherland Medicine Company of Paducah, Ky. From the analysis made, it

appears that PoDoLax is an aromatized syrup, containing phenolphthalein in suspension and fortified by the addition of an extract of senna. Its laxative action is due chiefly to the phenolphthalein, of which each dose contains about 1.8 grains. Podophylin was not found to be present (*Jour. A. M. A.*, Aug. 15, 1914, p. 595).

SHORTAGE OF DRUGS.—In view of possible drug shortage, physicians should bear in mind that many proprietary foreign preparations are made and sold in the United States under their descriptive names, thus dionin as ethyl morphin hydrochlorid, urotropin as hexamethylenamin and Diuretin as theobromin sodium salicylate (*Jour. A. M. A.*, Aug. 22, 1914, p. 692).

MIXED VACCINE AND PHYLACOGENS.—The unscientific character of mixed vaccines and of the mixed filtered products of a number of vaccines marketed as "Phylacogens" has been especially emphasized and the danger from their indiscriminate use pointed out. Recently John F. Anderson held that the claim that the combination of dead bodies or the filtered products of a number of different bacteria are useful for the treatment of certain diseases with a specific cause, closely approaches quackery. Victor C. Vaughan also has pointed out the danger of the indiscriminate use of bacterial products and observed that untoward results are rarely reported. Physicians who are tempted by the optimistic statements of manufacturers to give complex bacterial products a trial, should remember that the warnings of disinterested scientists are of far more value than uncritical clinical reports put out under commercial auspices (*Jour. A. M. A.*, Aug. 29, 1914, p. 785).

THE RADIO-ACTIVITY OF SARATOGA SPRINGS WATER.—An estimation of the radio-activity of Saratoga Springs water, made by the United States Bureau of Mines, shows that the activity is due in the main to radium emanation, which is therefore readily lost, and not to dissolved radium salts. The total activity of the water is rather low, that of the Crystal Rock spring, though not exceptional, is considerably above the average. The activity of different springs varies widely, some being more than twenty times as active as others. A similar variability is known to exist at Hot Springs, Ark., but only the vaguest information has been made public by our government (*Jour. A. M. A.*, Aug. 29, 1914, pp. 788 and 795).

RADIUM IN CANCER.—Radium can be used successfully to destroy growths on the surface whose entire extent can be exposed to its energy. Extensive growths involving deep structures and disseminated growths are beyond its control, and there is no reason to believe that they will ever be brought within its control. The effects and the limitations of radium in the treatment of cancer are the same as those of the Roentgen ray (*Jour. A. M. A.*, Aug. 29, 1914, p. 787).

PERTUSSIS VACCINE.—The Bordet-Gengou bacillus is recognized as the cause of whooping-cough and a vaccine prepared from it is used with success, although it is the general experience that when a child is already in the stage of incubation, the vaccine will not prevent the development of the disease (*Jour. A. M. A.*, Aug. 29, 1914, p. 796).

SCARLATINA VACCINE.—The so-called scarlatina vaccine is said to consist of killed streptococci from scarlet fever cases. While the infectious agent of scarlet fever has not been established, the close association of streptococcus with scarlet fever has been considered a warrant for the use of antistreptococcus serum, and various vaccines prepared from this organism, in the treatment of scarlet fever (*Jour. A. M. A.*, Aug. 29, 1914, p. 796).

BOOK REVIEWS

THE PHILOSOPHY OF RADIO-ACTIVITY. By Eugene Coleman Savidge, M.D. Published by William R. Jenkins Co., New York. Pp. 151. Octavo. Cloth, \$1.50 net.

This interesting and at this time highly practical volume enables one, even though not possessed of a profound knowledge of physics, chemistry and biology, to grasp quickly and without much effort the laws and significance of the subject of radio-activity.

Radio-activity is defined as the end of a force which vitalizes the universe. Time and space annealed together by the force of the universe slowly disengage according to immutable mathematical laws. Cancer and malignancy are only a small part of this great disengagement and for their understanding as well as for that of all the other sciences, a great remodeling has taken place since the discovery of radium. Savidge presents this thesis: that matter is involuted with selective purpose and that there is an attraction of duration for matter which is as mathematical as the attraction of gravitation.

The book is worth reading, for it opens up new fields and is explanatory of many hitherto obscure points in connection with life and growth and the deviations of growth represented by new growths or tumors. The publisher presents the book in very attractive form.

THE THEORY AND PRACTICE OF BLOOD-LETTING. Presented from the point of view of our present knowledge. By Prof. Dr. Heinrich Stern in New York. Weurzberg, Verlag von Curt Kabitzsch. Pp. 144. Price, paper, M. 3.50; bound, M. 4.50.

Our New York confrère has presented in an attractive garb "the forgotten art of blood-letting." He considers the procedure from a theoretical as well as a practical point of view and has grouped in this monograph the views of those clinicians and physicians who are beginning, after careful investigation and comparison, to say a good word for blood-letting as a therapeutic measure. He is not, in practice, as enthusiastic as Clutterbuck of old, but is hopeful that the progress made during the last few years will revive the procedure. After an interesting historic introduction, he discusses the changes in the functions of the blood, its quantity and distribution as well as its composition which follows phlebotomy, and then discusses the present status of the technic of phlebotomy.

It is truly refreshing to read in a scientific book concerning "dry cupping" and "phlebotase" and "scarification" and "cupping" proper and "artificial"

and "natural leeches," etc.—names with which the younger members of the profession are not even familiar.

In the second part the various diseases which demand either the local or general abstraction of blood are considered, including the abstraction of blood in children and the prophylactic use of it. The references to the literature are very complete and a satisfactory index, so rare a thing in a German book, materially assists in the reading of this book. The illustrations which decorate the volume are to the point and well executed.

It might be a profitable venture for some one of the many German speaking young men who are waiting both in New York and out of it for an opportunity "to bleed" people, to translate into our vernacular this brochure.

A HISTORY OF LARYNGOLOGY AND RHINOLOGY. By Jonathan Wright, M.D., Director of the Department of Laboratories, New York Post-Graduate Medical School and Hospital. Second Edition, Revised and Enlarged. Octavo, 357 pages, illustrated. Cloth, \$4.00 net. Lea & Febiger, Philadelphia and New York, 1914.

As the author says, "this is the story of the records of the nose and throat in general medicine with the general drift of medical history." The story is most entertainingly written, is full of charm and engages the reader's attention throughout. From the time of Egyptian medicine, the author traces the growth of this branch to its present modern development. The book affords not only pleasure and recreation for a leisure hour but gives the reader breadth and depth of view not only of his specialty but of all phases of medical practice that will be useful in his daily routine.

SCHOOL JANITORS. By Helen C. Putnam, A.B., M.D., Chairman of the Committee of the American Academy of Medicine to Investigate the Teaching of Hygiene. Cloth, 200 pp., 16 mo., \$1.00 postpaid. American Academy of Medicine Press, 52 North Fourth Street, Easton, Pa.

This excellent book consists for the most part of contributions previously made by Dr. Putnam to the *Child-Welfare Magazine*, the organ of the National Congress of Mothers and Parent-Teacher Association. The work contains much information of paramount value to parents that should lead to improved conditions of schools. It is such books as this that will arouse intelligent investigation by the people into the conditions of school life and determine whether or not those conditions are a menace to child life, thus leading to proper remedies. The book will do real service in the work of health protection.

A HANDBOOK OF PSYCHOLOGY AND MENTAL DISEASES FOR USE IN TRAINING SCHOOLS FOR ATTENDANTS AND NURSES IN MEDICAL CLASSES, AND AS A READY REFERENCE FOR THE PRACTITIONER. By C. B. Burr, Medical Director of Oak Grove Hospital (Flint, Mich.), formerly Superintendent of the Eastern Michigan Asylum, etc. Fourth edition. Revised and Enlarged, with Illustrations. F. A. Childs Co., Publishers, Philadelphia.

This small book, now offered in the fourth edition, offers in compact form the experience of a clear-

headed, practical man, who has demonstrated his ability to take good and kindly care of insane and nervous folk and to instill into his assistants, nurses and attendants a spirit of gentleness and a desire for efficiency. The book only aspires to fill a modest need and it does that and more. It is worth the while of any physician to read it, and it offers to the nurse and attendant a guide to better comprehension of people mentally sick and of their duty toward them.

OUTLINES OF GREEK AND ROMAN MEDICINE. By James Sands Elliott, M.D., Ch.B., Edinburg, Editor of the *New Zealand Medical Journal*. London: John Beal Sons and Danielson, 1914. Pp. 165.

Dr. Elliott, who has written a most interesting little work, has gone about it in rather a peculiar way. He treats first of Roman medicine and then of Greek medicine, of which latter he gives an account to 280 B. C. Then Roman medicine is returned and treated of, up to Paulus Aegineta, of the Alexandrian School, who lived in the sixth century B. C. He describes very interestingly the social status of practitioners which, as is well known, was not very high, and the fact that most of the physicians in Rome were Greeks afforded splendid opportunity for such men as Cato and Pliny to ridicule them. Then as now, much of the abuse was of course undeserved, although it was difficult to decide which was the quack and which the learned doctor.

Dr. Elliott has collected many facts of great interest and value to the medical historian and the book will prove interesting reading to those who are just about to get an insight into the beauties of medical history, although we confess that the arrangement of the subjects does not strike us very favorably. The theme is a very large one and would require a very extensive volume for its thorough presentation.

It is gratifying that the English speaking world is awakening to the value of medical history and is presenting it in an interesting and fascinating manner.

A MEDICAL HISTORY OF THE STATE OF INDIANA. By G. W. H. Kemper, M.D. Illustrated. American Medical Association press, Chicago.

The little volume contains much interesting information, although there are a few statements which might with advantage have been expressed differently. Such illustrious characters as John S. Bobbs, Theophilus Parvino, William H. Wishard, George R. Mears and Joseph Eastman are entertainingly described among the two thousand others which are given more or less consideration. The book represents a great deal of work on the part of its author and should appeal to all those who are interested in medical history in America.

COLLECTED PAPERS BY THE STAFF OF ST. MARY'S HOSPITAL, MAYO CLINIC, ROCHESTER, MINNESOTA. 1913, Philadelphia and London. W. B. Saunders Company, 1914.

This latest volume of papers contributed by the staff of the Mayo Clinic comprises a great many reprints, which doubtless are valuable for reference when bound in one volume. The volume is illustrated and well-edited, containing an index of con-

tributors, bibliographic index and a comprehensive subject index.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., at Mercy Hospital, Chicago. Volume III, Number 3 (June). Octavo of 213 pages. Illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Published bimonthly. Price per year: Paper, \$8; cloth, \$12.

A most valuable number. The first group of subjects embraces six Clinical Talks on Surgical and General Diagnosis. These are followed by a goodly array of clinics on a variety of surgical conditions.

ANOCI-ASSOCIATION. By George W. Crile, M.D., Professor of Surgery, School of Medicine, Western Reserve University; Visiting Surgeon to the Lakeside Hospital, Cleveland, and William E. Lower, M.D., Associate Professor of Genito-Urinary Surgery, School of Medicine, Western Reserve University; Associate Surgeon to the Lakeside Hospital, Cleveland. Edited by Amy F. Rowland. Original illustrations. W. B. Saunders Company. Philadelphia and London, 1914.

Surgical progression is gradual, and is possible only through knowledge which comes from long records of successes and failures. Only occasionally does some superior mind direct us to facts which make for more rapid and more certain advance. As examples of striking enterprise, we may recall Lister and those who introduced anesthetics; and we venture that almost as distinct an impetus toward the goal of *finished* surgery is given by the recent promulgation of the so-called theory of anoci-association.

A modest volume of some two hundred and fifty pages of text interspersed with numerous photographs, diagrams and charts, suffices for the elucidation of this new doctrine. The general character of the book requires no particular comment, unless it be to direct attention to some rather novel strategies of the authors who, for example, employ the photograph of an exhausted athlete to drive home the significance of a stated fact! The style is interesting. The authors are positive in their views, and courageous in the expression of them. Indeed, the confident assurance with which the subject of shock is approached is quite infective; the subtle enthusiasm in and between the lines is so compelling that we might willingly acquiesce in the intricate explanation of the problem were we unmindful of the fact that one of the authors has previously offered, with the same consummate assurance, several successive solutions for this complex problem.

The book is in two parts, Part I being devoted to an exposition of the authors' conception of the kinetic theory of shock, and Part II to the application of the kinetic theory to the technic of surgical operations. The fundamental purpose of the book is the practical presentation of the technic of anoci-association. Stated briefly, the hypothesis is that a certain set of organs, among which are brain, thyroid, adrenals, muscles and liver, may be grouped as a kinetic system, whose function is to convert potential into kinetic energy, in response to adequate stimuli. If stimuli are overwhelmingly intense, then the kinetic system—especially the brain—is exhausted, even permanently injured. In other words, shock is

the result of intense stimulation of the kinetic system by physical exertion, emotion, trauma, etc. The deduction from these premises is that the exclusion of both traumatic and emotional stimuli will wholly prevent the shock of surgical operations.

The manner of excluding these stimuli is described in Part II. Different operations are described separately, but we may group the maneuvers as precautions against both emotional and traumatic stimuli. Unpleasant emotions are guarded against by kindly, confident, reassuring management and by careful nitrous oxid anesthesia preceded by narcotics hypodermically. Anesthetics are begun in bed in some instances. The after-treatment is carefully planned. The traumatic stimuli are excluded by local infiltration of the operative site, and blocking off the operative field by injection of quinin and urea. Moreover, emphasis is laid on sharp, clean incisions, gentle manipulation, ample exposure, no traction, thorough hemostasis, and closure without tension. Difficult operations, or operations in weakened patients are to be completed in two stages. Descriptions of some operations are amplified at the expense of others; but the authors satisfactorily explain the seeming lack of balance. Obviously, the method requires an infinite amount of attention to detail, and is hardly applicable in emergency surgery, which furnishes the greater proportion of shocked patients. And further, it is apparent that the technic is of vastly more service in the prevention than in the alleviation of the condition.

An inventory of the book leaves us with two impelling questions, viz.: (1) is the hypothesis justified? and (2) is the application of the technic warranted? We withhold judgment in the first. In support of his hypothesis Crile arrays his evidence to show that the phenomena of exhaustion from physical exertion closely resemble shock; that the phenomena produced by trauma and by extreme passion or fear are analogous; that fear and trauma have a common phylogenetic origin and are akin; and that in the brain cells there is found a physical basis of shock. While admitting the attractiveness of this theory and admitting the indubitable evidence of the effect of mind on body, we feel that Crile's research is so absolutely unique an adventure in investigative fields that we must restrain our credulity and hesitate in accepting until further corroborative evidence is introduced. The chapter on histologic pathology of shock borders on the speculative metaphysical so near as to be semimysterious and disconcerting; for cell-activity and cell-function may not be pictured under the microscope, consequently cannot be accurately correlated with cell-structure. We hesitate not at improbability of correctness of conclusion, rather only at apparent inconclusiveness of proof.

We answer the second question decidedly and emphatically in the affirmative. From a purely practical point of view, the enunciation of this doctrine is of tremendous significance. In his imperative emphasis on preserving the patients' mental poise; on rational anesthetics; on gentleness, thoughtfulness and dexterity on the part of the operating surgeon; Crile outlines essentials which, if observed, will result in a rejuvenation of surgery and will lead to a refined elegance and finish of surgical technic, the superior excellence of which defies definition.

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

PUBLICATION } W. H. BREUER, M.D., Chairman
COMMITTEE } S. P. CHILD, M.D.
 } M. A. BLISS, M.D.

ORIGINAL ARTICLES

THE USE OF THE ELECTROCARDIOGRAPH IN THE STUDY OF THE HEART*

G. CANBY ROBINSON, M.D.
ST. LOUIS

With new methods for the clinical study of the circulation there have come new conceptions of circulatory disturbances. It is one of these newer conceptions to which I wish to direct your attention, and to show how the electrocardiograph has extended and clarified it.

The heart can no longer be looked upon clinically merely as a pump, forcing the blood through the systemic circulation and through the lungs, but it must be considered as consisting of two separately contracting muscle masses composing the auricles and ventricles. Upon this conception rests the large structure of knowledge which has been built up about the irregularities of the heart-beat. The efficiency of the heart in normally maintaining the circulation depends in part on the proper coordination between these two separately contracting muscle masses. I shall endeavor to show how the electrocardiograph is, at present, the best method for studying this coordination and its derangements. Besides this knowledge of coordination there are other facts of distinct clinical value obtained by the use of the instrument which will not be discussed in the present paper. The records to be shown represent the commoner forms of incoordination of the heart-beat which have been met with during the past few months in the clinic. Technicalities will be included only so far as necessary for an understanding of the records, and a complete explanation of the electrocardiographic method will not be undertaken.

* From the Department of Medicine, Washington Union Medical School.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

The electrocardiograph consists of a string galvanometer which indicates by the movements of its string the passage of minute electrical currents and an attachment by which the passage of these currents may be graphically recorded and which can, in turn, be interpreted as muscular contractions of the heart. The string of the galvanometer, which consists of an exceedingly fine platinum or silver covered quartz thread, suspended in a strong magnetic field, is so adjusted that the passage of a one millivolt current through it causes a deflection of the string which yields a wave on the record one centimeter high. The movement of the string is always exactly in direct proportion to the strength of the current passing through it, so that the strength of any current causing a wave in the record is known.

In order to simplify the principles of electrocardiography, let us first explain how the contraction of any muscle may cause a current to pass through the galvanometer. A muscular contraction always begins at the point where the muscle is stimulated, no matter whether this stimulus be mechanical, electrical or the result of a nerve impulse. A normal muscular contraction never begins in all parts of a muscle simultaneously. The point at which the muscular contraction begins becomes electrically negative to all parts of the muscle still in the resting stage. If then, the two ends of a muscle are joined by an electrical conductor, such as a wire, a current will pass through this conductor from the electrically positive to the electrically negative end of the muscle. In other words, a current will pass through the conductor from the resting end of the muscle to that part which has been stimulated and has gone into contraction. When the contraction has involved the entire muscle, no current passes, as all parts of the muscle again show no difference in electrical potential, just as they do in the resting flaccid state. As the contraction in the part first contracting subsides, however, an electrical current passes through the conductor in the opposite direction from that

first occurring. This is because the end of the muscle last to contract remains in contraction after the other end has relaxed, and is, therefore, electrically negative to the relaxed end. If the conducting wire attached to the two ends of the muscle has in its circuit the string of the galvanometer, the passage of the currents move the string first to one side and then to the other.

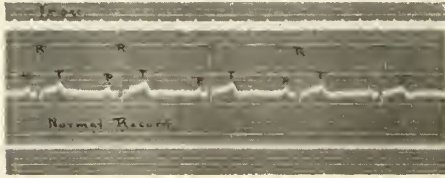


Fig. 1.—Electrocardiogram from a normal heart.

The movements of the string are recorded by throwing its shadow on a moving strip of sensitive photographic paper. Any movements of the shadow can then be seen in the form of a curve when the paper has been developed and fixed in the usual way.

Next let us explain how this procedure can be applied so that the electrical currents arising

in the circuit, the passage of these currents are indicated by the movements of the string. It is the photographic record of these movements on the moving sensitive paper which constitutes the electrocardiogram. The length of the wires forming the circuit is practically immaterial, so that it is possible to make the records without moving the hospital patients from their beds, or without disturbing them in any way, provided wires can be led from the bedside to the galvanometer, as has been arranged in the hospitals in which the instrument is in use.

A record is obtained of the shadows of all objects which intercept the light passing from the arc lamp behind the galvanometer to the sensitive photographic paper, and so the shadow of the lever of a Jaquet chronograph hanging in front of the lens of the camera and ticking sidewise every fifth of a second shows on the record as a line interrupted every fifth of a second. This time record allows the distances on the record to be converted into time values, and the estimation of the rate per minute of any recurring movement of the string.

Lastly, let us explain how the movements of the cardiac muscles affect the string of the gal-

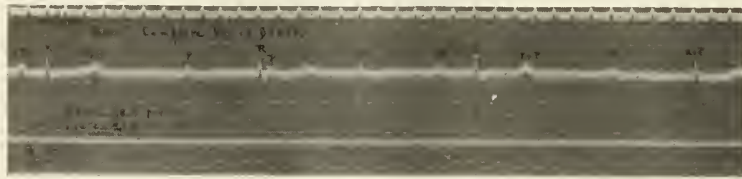


Fig. 2.—Complete heart-block. Auricular rate 68.6, ventricular rate 27.3 per min.

vanometer. The impulse of the cardiac contraction arises at the base of the heart where the superior vena cava enters the right auricle, so that the contraction begins there, and the base of the heart is rendered electrically negative to the apex. At the onset of the contraction of the auricles, therefore, a current passes through the wires from the left leg to the right arm and the string of the galvanometer is deflected. This deflection is recorded on the moving paper. The auricular contraction is very soon completed and the string of the galvanometer returns to its original position. The record shows a small upwardly directed wave of short duration resulting from the auricular systole. When the auricular activity has ceased there is an appreciable period of time before ventricular activity begins, a time during which the stimulus of the heart beat is passing from the auricles to the ventricles. The contraction of the ventricles, being more complex, causes not one but a series of deflections of the string, and is, therefore, represented in the record by a series of waves. There is first a small downwardly directed or negative wave followed im-

mediately by a large upwardly directed wave. By attaching a plate to the left leg and connecting it with a wire we have a conductor leading off from the apex of the heart. When the two wires are brought together to form a circuit, electrical currents pass through them during each movement of the cardiac muscle and when the string galvanometer is put in this cir-

cuit, the passage of these currents are indicated by the movements of the string. It is the photographic record of these movements on the moving sensitive paper which constitutes the electrocardiogram. The length of the wires forming the circuit is practically immaterial, so that it is possible to make the records without moving the hospital patients from their beds, or without disturbing them in any way, provided wires can be led from the bedside to the galvanometer, as has been arranged in the hospitals in which the instrument is in use.

mediately by a tall, sharp, positive wave which ends in a second small negative wave. These three waves occur when the stimulus first reaches the ventricles, and when the basal portion of the ventricles is in contraction while the apical portion is still at rest. When the contraction has spread throughout the ventricles the string returns again to its original position, as no current is then passing through the wires. As diastole of the ventricles sets in, however, the main portion of the ventricles relax before

No condition illustrates the incoordination of the auricles and ventricles so well as that of complete heart block, and a series of curves from such a case is shown to illustrate this point as well as to demonstrate several interesting features of this disease, which can be demonstrated in the records. The first curve from this case shows the waves of auricular activity occurring regularly at a rate of 68.6 per minute (marked *p*), while the waves of ventricular activity (marked *r* and *t*) occur at a rate of

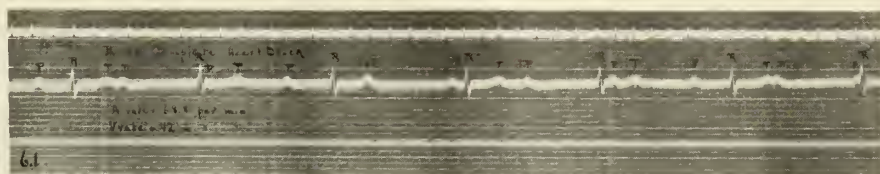


Fig. 3.—Complete heart-block. Auricular rate 68.8; ventricular rate 42.2 per min. Ventricular rate more rapid than in curve of Fig. 2. Auricular rate unchanged.

the portion about the aortic and pulmonic valves, and a final current passes through the wires, just as it does at the end of the contraction of an ordinary muscle. The final current causes a deflection of the string, which is recorded as a rather long positive wave marking the end of the ventricular systole. During diastole no currents pass, and as the string remains in its original position, this part of the cardiac cycle is represented by a straight line in the curve.

The wave representing the auricular contraction and the four waves representing the ventricular contractions have been designated by five consecutive letters of the alphabet: *p*, *q*, *r*,

27.3 per minute. It is also seen that the relation of the *p* waves to the *r* waves, which is constant in the record of the normal heart, is here wanting, and the record indicates that the two parts of the heart are beating entirely independently. In this case the patient had a definite history of syphilis and a strongly positive Wassermann reaction, so that it is fair to assume that a syphilitic lesion has involved the auriculo-ventricular bundle, thus preventing the passage of the stimuli of the heart from the auricles to the ventricles. This has forced the ventricles to establish their own rhythm in order to maintain the circulation.



Fig. 4.—Complete heart-block. Marked ventricular arrhythmia shown.

s and *t*. As the *q* and *s* waves are usually inconspicuous they have not been marked on the curves to be shown, while the positive waves, *p*, *r* and *t*, are lettered.

It will be seen from the curves that the wave of auricular activity can be readily distinguished from those representing the ventricular activity, so that there is no difficulty in determining whether or not the two parts of the heart have a normal coordination.

The first curve was obtained from a normal individual and shows the normal relation of the auricular and ventricular activity. The various waves that have been described can be seen.

The second record from this case demonstrates the fact that the auricular and ventricular rates are quite independent. Here the auricles are beating at the same rate as before, while the ventricles are beating at a distinctly faster rate, i. e., 42.2 per minute, instead of 27.

The third record shows the occurrence of marked ventricular arrhythmia. Two ventricular cycles are seen, one having a duration of 2.4 seconds and the second of 4.2 seconds. This ventricular arrhythmia occurs without any change in the auricular rhythm. It is on the occurrence of these ventricular pauses that a very significant feature of the clinical picture

and contract with a corresponding vigor, but it is seen that these contractions produce records practically identical with those caused by the usual heart-beats. This point is brought out to demonstrate the fact that no conclusions as to the force of the ventricular contractions can be drawn from the size of the waves produced. The differences in the electrical potential which governs the size of the waves, being dependent on other factors.

The occurrence of premature ventricular contractions has in itself no serious prognostic

ularity constitutes about 50 per cent. of all forms of arrhythmia that are met with, and its definite diagnosis by means of the electrocardiograph is one of the most useful purposes of the instrument. It is in this condition that digitalis is of the greatest benefit. The drug diminishes the ease with which the abnormal auricular activity stimulates the ventricles, and thus lessens the frequency of the ventricular contractions. This is almost invariably followed by an improvement of the circulatory condition. Although in untreated cases the ventricles are



Fig. 7.—Auricular fibrillation. Ventricular activity abnormally rapid and irregular.

import. They not infrequently occur in healthy individuals, but especially those of neurotic temperament. The patient from which this record was made suffers from chronic myocarditis and mitral insufficiency, but who no longer shows premature ventricular systoles after a course of digitalis therapy.

The seventh record shows a type of cardiac disorder frequently met with, which remained obscure until its nature was revealed by the electrocardiograph. It is seen that the tall waves of ventricular origin occur irregularly at

usually beating with marked irregularity both in force and rhythm and at an abnormally rapid rate, cases under digitalis therapy may show a ventricular rate not exceeding the normal and the ventricular arrhythmia may markedly diminish. The eighth record is from such a case, and although the undulations between the ventricular waves are seen showing that auricular fibrillation is present, the ventricles show but slight irregularity and are beating at a rate of 76 per minute. Digitalis therapy in these cases should be directed towards obtaining such a result,

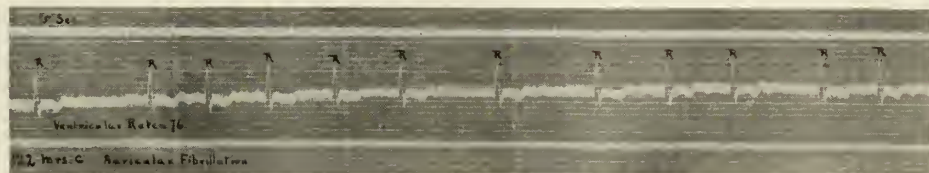


Fig. 8.—Auricular fibrillation under digitalis therapy. Ventricular rate 76 per min. The irregularity not marked.

a rate of 118 per minute and that they are not preceded by any definite wave representing auricular activity. Between the ventricular waves the record shows a slightly undulating line. It has been demonstrated by the experiments of Lewis and of Rothberger and Winterberg that this form of record is obtained when the auricles no longer show their normal rhythmic contractions, but instead are possessed of a rapid, tumultuous, incoordinated activity known as fibrillation. This auricular activity sends stimuli to the ventricles irregularly and usually at a rate too rapid to maintain the circulation efficiently. This form of cardiac irreg-

when patients with auricular fibrillation can be not infrequently maintained at a fairly high level of efficiency.

These few curves from cases of complete heart-block, ventricular premature contractions or extra systoles and auricular fibrillation serve to demonstrate the importance of the conception of the heart-beat, that its normal mechanism is dependent on a proper coordination of the two separately contracting portions of the heart, and that the electrocardiograph serves to demonstrate clearly any derangement of this coordination that may occur.

1806 Locust Street.

CARDIAC ARHYTHMIA*

P. T. BOHAN, M.D.
KANSAS CITY, MO.

Only recently, in the diagnosis of heart disease, has much attention been paid to the disturbance of rhythm. Some arhythmias have no significance, the only value of their recognition being an assurance to the patient that they do not mean heart disease; while, on the other hand, others may be the only objective symptom of heart failure. In fact, heart failure may be the result of abnormal rhythm. The nature of cardiac arhythmia is no longer a mystery, but one of the best understood subjects in the whole science of medicine.

A clear understanding of the irregularities has been made possible by means of the polygraph and electrocardiograph. However, if the principles of arhythmia are understood, a correct diagnosis can be made in the majority of cases by merely feeling the pulse and auscultating the heart.

When the rhythm of the heart is normal, all the beats occupy the same space of time and are the same size. Any deviation therefrom is known as an irregularity or an arhythmia. Normally, the impulse for contraction of the heart begins at the base of the right auricle and passes along the wall of the auricle over His' bundle to the ventricle.

In embryonic life the heart is in the form of a tube and, where the venæ cavæ empty into it, there is a dilated portion which is called the sinus venosus. In the development of the heart the sinus venosus becomes incorporated in the wall of the right auricle and the mouths of the great veins. The sinus venosus cannot be recognized macroscopically in the mammalian heart, and the few embryonic muscle and nerve cells that constitute this important area were discovered by Keith and Flack, hence the term "the node of Keith and Flack" or "sinus node." In a frog the sinus venosus is a pouch of considerable size, and during a cardiac cycle (a frog's heart beats only eight or ten times a minute) one can see distinctly the contraction of the sinus; then, after an appreciable interval, the contraction of the auricle, and lastly the systole of the ventricle. Normally, the impulse for contraction always begins in the sinus; but it may originate at any point in the wall of either auricle or ventricle, in the node of Tawara, or in the bundle of His.

Although the heart will beat regularly after all connections with the nervous system are severed (section of the vagi and the sympathetics), the nervous system, through the two antagonistic nerve supplies, is constantly exerting an

influence on the sinus. The sympathetic nerve is the accelerator, its function being to increase the rate and force of the heart-beat; hence, the tachycardia in all conditions in which the chromaffin system is overactive, such as exophthalmic goiter, and in cases of neurosis associated with or due to hypersympathetic tonus. In most cases where the heart rate is increased as a result of stimulation of the sympathetic nerve, the rhythm is normal unless there is a disease of the heart muscle.

A clear understanding of the vagus nerve and its function is of the greatest importance in the study of cardiac arhythmia, because many of the irregularities are due to altered vagal tone. A source of irritation in any viscus supplied by the vagus may alter the rate or rhythm of the heart. Hoover¹ reports a case of heart-block due to reflex vagus inhibition caused by a thrombus in the right femoral vein. In childhood unstable vagal tone is particularly common, and, as I shall show later, is the sole cause of the heart's irregularities in the majority of cases under twelve years of age.

Experimental work by A. E. Cohn² would indicate that there is a difference in the action of the two vagi nerves on the heart. In a dog he found that stimulation of the right vagus produced a slow action of the whole heart, due to lessened rate of stimulus formation in the sinus; while stimulation of the left vagus produced heart-block by lessening the function of the bundle of His. A slow pulse or disturbed rhythm due to vagus stimulation can be relieved by atropin.

PULSE TRACING

Although the vast majority of cases of arhythmia can be diagnosed without any graphic records, such a diagnosis is not possible unless one has a clear idea of a normal tracing and the characteristic features of a tracing in each form of arhythmia. The instrument that records most accurately the events of a cardiac cycle is the electrocardiograph. However, this instrument is so expensive, so large and cumbersome, so difficult to manipulate, and the knowledge obtained by its use so slight in addition to that which can be secured by other more economical and less complicated methods, that it probably will never be in general use.

In my work I use the Mackenzie ink writing polygraph, a picture of which is shown in Figure 1. By means of this instrument a tracing can be taken simultaneously of any two given pulsations, the ones of the most importance being the radial artery and the jugular vein; but a record can also be obtained of the apex beat, the liver impulse and the respiratory

1. Osler's *Modern Medicine*, iv, 279.

2. Cohn "On the differences in the effects of stimulation of the two vagus nerves on the rate and conduction of the dog's heart." *Jour. Exper. Med.*, 1912, xv, 49.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

movements. The rate of speed at which the paper is unrolled can be changed so that a tracing can be taken of almost any length and at various speeds. While taking tracings the instrument should be stopped at intervals and cross lines made on the paper with both pens, so as to have fixed points to measure from in analyzing the tracings. A normal tracing is shown in Figure 2. The lower tracing marked "radial" shows the pulsations of the radial artery, and the upper tracing marked "venous" shows the movements of the jugular veins and carotid artery. The venous tracing is obtained by placing the receiver over the jugular bulb on the right side, which is a little above and one inch outside the sterno-clavicular joint. In the study of an arterial tracing there are only a few points to be considered. It is important to note that all of the beats are the same size and an equal distance apart. The small notch "N" in the down stroke is due to the closing of the aortic valve and coincides with the opening of the auriculo-ventricular valves. The space "E" between the two vertical lines is the period of ventricular systole while the semilunar valves are open.

In a normal venous tracing there are three elevations or waves for each cardiac cycle. The cause of each wave can be determined by finding its relation to some known event in the radial tracing. The pulse in the carotid, for obvious reasons, precedes slightly, about one-tenth of a second, the pulse in the radial. Therefore, the distance from the cross line in the radial tracing, to one-tenth second of any up-stroke, is measured with a caliper, and the wave in the venous tracing corresponding with this distance from the cross line in the venous tracing is due to the pulsation in the carotid and is marked "c." The bottom of the aortic notch is exactly the same distance from the lower cross line that the wave which follows c is from the upper cross line and is marked "v" on account of its being a ventricular wave. The wave which precedes c by about one-fifth of a second is caused by the systole of the auricle and is marked "a." As the a wave occurs with the beginning of the auricular systole and the pulsation in the carotid artery is practically simultaneous with the beginning of the ventricular systole, the distance between a and c, the a-c interval, represents the time it takes the impulse to pass from the auricle to the ventricle over the bundle of His. One not familiar with pulse tracings usually becomes confused by the venous tracing, but the fact is that nearly all irregularities can be diagnosed by careful analysis of the arterial tracing alone.

According to Mackenzie and Lewis, all the heart irregularities can be placed in the seven following groups:

1. Sinus arrhythmia.
2. Extrasystole.
3. Heart-block.
4. Pulsus alternans.
5. Paroxysmal tachycardia.
6. Auricular flutter.
7. Auricular fibrillation.

GROUP I.—SINUS ARHYTHMIA

In sinus arrhythmia the impulses are not formed regularly in the sinus; hence, there are irregular contractions of auricles as well as of ventricles. It is also called "youthful arrhythmia," "respiratory arrhythmia" and "functional arrhythmia"; but perhaps the best term is "vagal arrhythmia," because it is always due to altered tone of the vagus.

The irregularities in childhood are nearly always of this type. Friberger in 321 unselected schoolchildren between the ages of 5 and 14 found a moderate degree of this form of irregularity in 63 per cent., and in 12 per cent.



Fig. 1.—Mackenzie's Ink Writing Polygraph. Enclosed in the tin case are two clocks, one to drive the roller that unrolls the paper, and the other runs the time marker which records the time in intervals of one-fifth of a second.

the irregularity was marked. It is by no means uncommon in neurotic adults, and it is not infrequently confused by physicians with other forms of arrhythmia caused by organic heart disease. Its recognition is usually quite easy, as on forced respiration the pulse rate becomes rapid on inspiration and slow on expiration.

Figures 3 and 4 are typical instances of this form of arrhythmia. By comparing this tracing with each of the other forms of arrhythmia, it is readily seen that it does not bear a close resemblance to any of them.

The patient from whom this tracing was taken is a vigorous youth of 14. I was asked to see him because his physician had advised against exertion of all kinds. This advice the patient was inclined not to accept, because he was a leader in athletics in school and never noticed that he was short-winded. A careful examination failed to reveal any signs of organic heart disease.

The diagnostic features of sinus arrhythmia are its relation to respiration, its frequency in youth and neurotics, and its disappearance when the heart rate is increased by exercise or by atropin. This form of arrhythmia has been described as a diagnostic sign of tuberculous meningitis in childhood; but here it is only a sign of vagal irritation, and more marked in childhood on account of the unstable vagal tone in youth.

Regarding the prognosis of this form of disturbed rhythm, Dr. Mackenzie, who has been

in Figure 5. The small beat "p" represents the premature contraction of the ventricle. It is smaller than the normal beat, because the ventricle contracts so early that only a small amount of blood is expelled into the aorta. Sometimes the quantity of blood in the ventricle is not sufficient to open the aortic valves, in which case there will be no pulse in the artery; but auscultation of the heart during the pause in the pulse will reveal a heart sound due to closure of the auriculo-ventricular valves. Note in the venous tracing in Figure 5 that

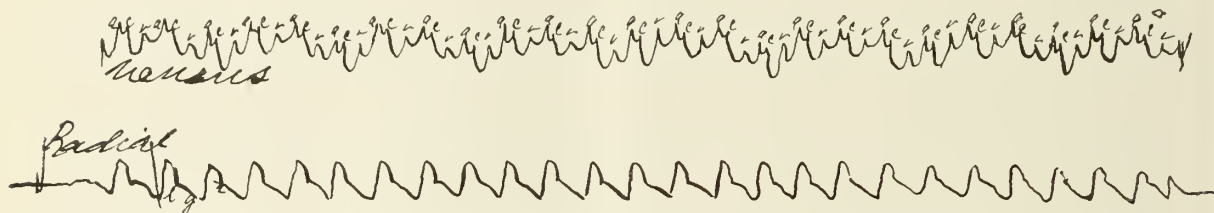


Fig. 2.—Normal tracing of the radial and jugular pulses. The first, "A," is due to the systole of the auricle, wave marked "V" is caused by the storing of blood in the tricuspid valves are closed. The short ventricle lines at the top

the venous tracing there are three waves for each cardiac cycle. The small notch marked "N" represents the closure of the aortic valves and the opening of the auriculo-ventricular. In cycle. The first, "A," is due to the systole of the auricle, wave marked "V" is caused by the storing of blood in the tricuspid valves are closed. The short ventricle lines at the top the time in intervals of two-tenths of a second.

a close student of heart irregularities for twenty-five years, has this to say: "I have watched those showing it grow up and pass into adult life, and I have never found a single case where it has been associated with any form of heart failure, so that I now look on it as being a physiological phenomenon and occurring in perfectly healthy hearts."

No treatment is indicated and it is not advisable to restrict the activities in any way.

a falls on *c*, and that this wave is higher than the others, which is due to the ventricle contracting at the same time as, or slightly preceding, the contraction of the auricle. As the stimulus that causes a premature contraction is not rapidly repeated, the ventricle waits for the next impulse to come down from the auricle; hence, the long pause following the small beat—the "compensatory pause." The characteristic feature of the ventricular premature con

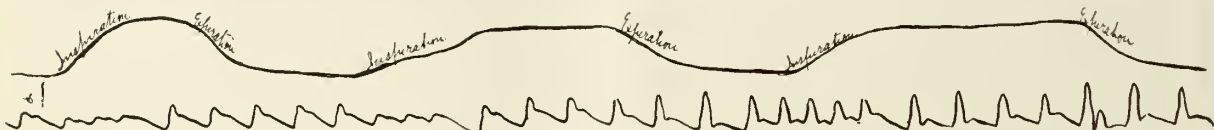


Fig. 3.—Sinus arrhythmia, showing the relation of the irregularity to respiration.

GROUP II.—EXTRASYSTOLE

This group comprises the most common form of arrhythmia in the adult. The irregularity is due to what is commonly known as extrasystole; but, as the disturbance in rhythm is due to a premature systole rather than to an extrasystole, the term "premature contraction" suggested by Mackenzie seems to be the better one. This form of arrhythmia is described in the older text-books as an intermittent pulse, and it is usually the cause of the irregularity when the patient says his pulse "skips a beat occasionally." The origin of the impulse may arise in either the ventricle or the auricle and sometimes, although rarely, in the node of Tawara.

The ventricular premature contraction is by far the most common, and an example of the disturbance of rhythm produced by it is shown

traction is that the distance between the preceding beat and the succeeding beat is always the same as in two ordinary beats. When the premature contraction arises in the auricle, it is usually followed by a ventricular response, the compensatory pause being absent, as shown in Figure 6. We have little knowledge of the causes of premature contractions: in some cases they recur frequently; in others they are rare events; in some cases they are observed after every few beats throughout a life-time, and in others they seem to occur only in spells.

Experimental research by Knowl and Hering³ demonstrated that increased intracardiac pressure as the result of constriction of the aorta, or of the pulmonary artery, or reflex stimulation of the vasomotor system, would induce

3. Hering: München. med. Wchnschr.

premature contraction. Undoubtedly, any excessive rise of intracardiac pressure may induce an extrasystole, especially if the heart is unduly irritable, but their frequency in neurotics, when there is no reason to assume increased intracardiac pressure, would suggest that hyperexcitability of the myocardium, due to a neurosis, is a sufficient cause for their occurrence. The causes given for extrasystole by most writers are neurosis, excessive use of tobacco, coffee or tea, auto-intoxication, and too much of any of the drugs of the digitalis group. Tobacco is not an uncommon cause. The

nored. As a rule, if the nature of the irregularity is explained to the patient, no further treatment will be required. The drugs of most value are atropin and the bromids.

GROUP III.—HEART-BLOCK

In this group are the cases with an abnormal rhythm due to a disturbance in the function of the bundle of His. The block may be complete or incomplete. When the block is complete, no impulses reach the ventricle from the auricle, so that the stimulus for ventricular contraction is formed in the ventricle itself. In this case

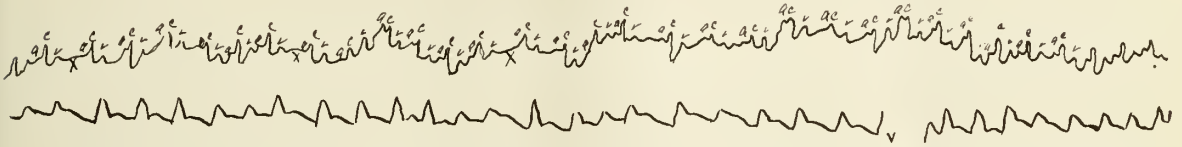


Fig. 4.—Sinus arrhythmia, the long pauses marked "X" between the "A" waves show that the auricles participate in the irregularity.

patient from whom the tracing in Figure 5 was obtained, smoked from fifteen to twenty cigars a day. There is no proof, either experimental or clinical, that alimentary auto-intoxication can in any way disturb the rhythm of the heart. That overdosage of digitalis, or any of its allies, is the cause of extrasystole, is a point of the greatest importance. Figure 7 is an example of the toxic effects of digitalis in producing an extrasystole after every physiological beat. This is the so-called coupled rhythm or pulsus

the pulse is always slow, usually less than 36, and, as a rule, regular. When the block is incomplete, the impulse for contraction of the ventricle comes down from the auricle, but there is a delayed transmission over the bundle. This may cause a missed beat occasionally, or there may be two, three or four contractions of the auricle to one of the ventricle, giving a 1:2, 1:3 or 1:4 block. The cause is usually some disease of the junctional tissue. According to Lewis, one-third of the cases in the adult are

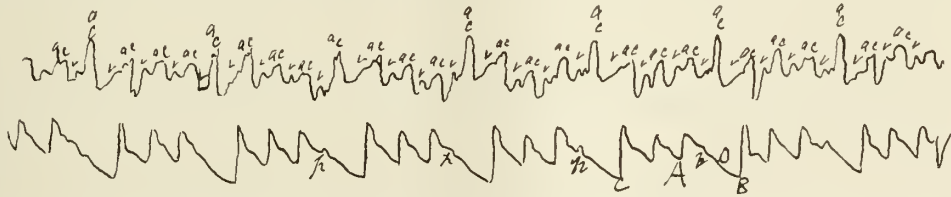


Fig. 5.—Extrasystole. The small beats "P" are due to the ventricular extrasystole. The distance from "A" to "B" is the same as from "A" to "C." "D" is the compensatory pause. In the venous tracing, where *a* falls on *c*, the peaks are unusually high, due to the auricles and ventricles contracting together.

bigeminus of Hering. Extrasystoles are extremely rare under 12 years of age, unless produced by some drug of the digitalis group. They seldom occur when the pulse rate is above 100.

Patients with this form of arrhythmia may complain of a "stopping of the heart," a "thud in the chest," or a "peculiar sensation in the brain," due in all probability to the large amount of blood thrown into the arteries with the contraction that follows the long pause.

This form of arrhythmia is not in itself a sign of heart disease, and patients presenting it may never develop any signs of cardiac insufficiency. In looking for signs of organic heart disease, the occurrence of an occasional, or even frequent, extrasystole should be completely ig-

due to syphilis. I have seen two cases that completely recovered on antisyphilitic treatment. It is a disease common to old age, and in patients presenting it the heart usually shows calcareous deposits or connective tissue changes in the bundle. It may occur in childhood due to infectious diseases. In diphtheria the cause is usually hemorrhage into the bundle. Lewis has found that a mild grade of block is not uncommon in rheumatic endocarditis. There is no doubt that stimulation of the vagus with drugs of the digitalis group, direct pressure on the nerve in the neck, or reflex stimulation as in swallowing, will produce a heart-block.

When the block is complete the condition is easily recognized clinically by the slow and regular pulse, the rate being usually less than

40, and the more frequent pulsations in the jugular vein. In the tracing shown in Figure 8 the block is complete everywhere except at the place marked "x." At this point the ventricle responds to the impulse from the auricle, but the *a-c* interval is markedly prolonged, being two-fifths of a second instead of one-fifth of a second, the maximum normal period. In this case the auricular rate was 90 and the ventricular 42, a little more than a 2:1 block.

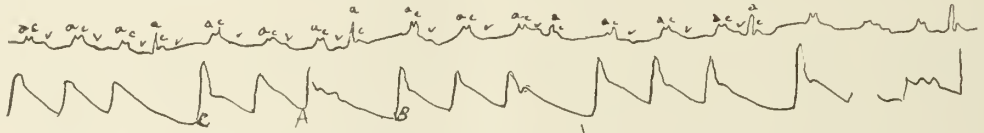


Fig. 6.—Auricular extrasystole. The irregularity is due to premature contraction of the auricle. The distance from "A" to "B" is less than from "A" to "C."

When the block is incomplete, convulsions may occur from anemia of the brain giving rise to the Stokes-Adams syndrome. Cessation of ventricular contraction for thirty seconds or longer is sufficient to cause a convulsion. A missed beat due to incomplete heart-block may be recognized clinically by auscultating the heart and hearing no sound produced by contraction of the ventricle during the pause, such as occurs in a missed beat due to an extrasystole.

The prognosis in heart-block is usually bad. However, when the block becomes complete, patients may live for a number of years and have a fair amount of cardiac efficiency. When

but all the beats occupy the same space of time. It is due to, and is in fact the only sign of, a disturbance in contractility. Unfortunately, it can only rarely be recognized without graphic records. The tracing in Figure 9 shows a moderate alternation. Unless the patient is taking large doses of a drug of the digitalis group, *pulsus alternans* can be regarded as a fairly positive sign of high-grade myocarditis. The prognosis is always bad. Digitalis may do harm.

GROUP V.—PAROXYSMAL TACHYCARDIA

This group includes a form of arrhythmia characterized by paroxysms of rapid and regular heart action due to pathological impulses. It has been quite positively demonstrated that the impulses do not arise in the sinus, but in some new focus of impulse formation which may be either in the auricle or ventricle. The paroxysms vary in duration from a few minutes to four or five days. The onset and offset of an attack is always quite sudden and nearly always with a long pause, due to an extrasystole. The tracing shown in Figure 10 shows the long pause at the end of an attack, which is followed by a normal rhythm.

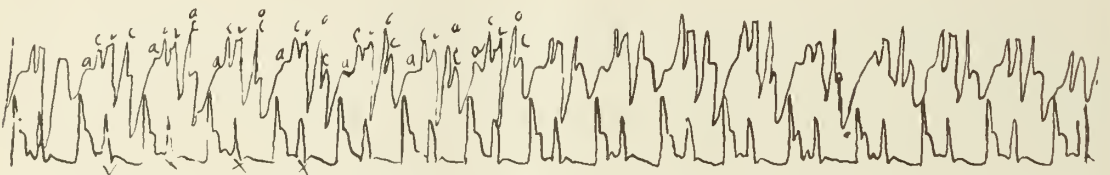


Fig. 7.—Ventricular extrasystole due to digitalis intoxication. Every physiological beat is followed by an extrasystole—pulsus bigeminus.

Every physiological beat is followed by an extrasystole—pulsus

due to syphilis, good results may be obtained by antisiphilic treatment. If caused by stimulation of the vagus, the block may be removed by a hypodermic injection of $\frac{1}{60}$ of a grain of atropin.

In incomplete heart-block, all drugs of the digitalis group are contra-indicated as they lessen the function of the bundle and consequently increase the block. When the block is complete and signs of loss of tonicity are present, digitalis may be given as the vagus has little or no influence on the ventricle, so the digitalis will do no harm.

GROUP IV.—PULSUS ALTERNANS

This rather rare form of arrhythmia is characterized by alternation in the size of the beats,

The cause of this form of arrhythmia is not well understood. The fact that there may be recurring attacks for years, without any other signs of heart disease, suggests the possibility of disturbed innervation. Lewis, who has done a vast amount of experimental work to solve the problem of etiology, is strongly of the belief that there is some intrinsic cause in the heart itself, and explodes the older views of withdrawal of vagal inhibition or accession of sympathetic influences. The same author was able to produce paroxysms of tachycardia in a dog by ligation of the coronary arteries, especially the right.

The heart rate during a paroxysm varies from 120 to 200, and the rate is little influenced,

if any, by position or emotion. During the attack the patient complains of a fluttering sensation in the chest; the blood-pressure falls 15 to 25 millimeters, and there is considerable lessening of cardiac efficiency as evidenced by lessened response to effort and by the fairly constant appearance of alternation as shown in Figure 10.

Various therapeutic measures have been recommended, such as an ice-bag to the precordium, inverting the patient and direct pres-

sure on the right vagus in the neck. As the basis of all therapeutic measures is the increase of inhibition, the administration of a rapidly acting drug to stimulate the vagus would seem to be the logical remedy. In this respect there is nothing that excels the action of strophanthin given intravenously.

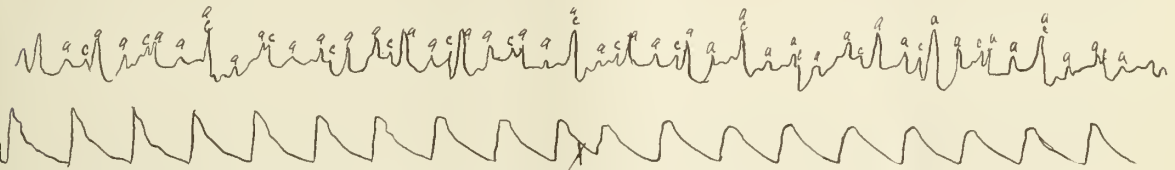


Fig. 8.—Heart-block. The ventricle is forming its own beats except at "X," where it apparently responds to an impulse from the auricle. The ventricle rate is 42 and the auricular, 90.

sure on the right vagus in the neck. As the basis of all therapeutic measures is the increase of inhibition, the administration of a rapidly acting drug to stimulate the vagus would seem to be the logical remedy. In this respect there is nothing that excels the action of strophanthin given intravenously.

The patient from whom the tracing in Figure 10 was obtained had been suffering from an attack of paroxysmal tachycardia for twenty-eight hours. The ordinary therapeutic measures being of no avail, he was given $\frac{1}{100}$ of a grain of strophanthin intravenously, and the paroxysm terminated abruptly, as shown by the long pause in the tracing, twenty-eight minutes after the injection was given.

The usual symptoms are moderate lessening of cardiac efficiency, but sometimes there may be well-marked signs of heart failure. The condition may be suspected when the pulse rate is between 90 and 150 without an obvious cause.

Cases with this form of arrhythmia respond quite readily to digitalis with a slowing of the pulse. Sometimes the digitalis produces a fibrillation of the auricle, and after the drug is discontinued the rhythm may become normal.

GROUP VII.—AURICULAR FIBRILLATION

Working with the electrocardiograph, Lewis⁵ and Rothberger and Winterberg in 1909 made the very important discovery that the cause of a completely irregular pulse is fibrillation of the



Fig. 9.—Pulsus alternans.

GROUP VI.—AURICULAR FLUTTER

In 1911 Jolly and Ritchie⁴ reported three cases with a disturbance of rhythm characterized by a tachycardia of the auricle. In the last two years a number of cases have been reported by Mackenzie, Lewis, Fulton and others.

In this form of arrhythmia the diagnosis cannot be made without mechanical means. The chief feature is the rapid auricular rate, which is usually between 200 and 340. Occasionally, although rarely, each auricular contraction is followed by a ventricular response, but as a rule the rate of the ventricle is between 90 and 140. This condition can be produced experimentally by faradic stimulation of the auricle and occurs

auricles. Fibrillation of the ventricles is not compatible with life; according to Hering, it may be one of the causes of sudden death. A marked irregularity of the pulse as a common finding in many cases of heart failure has attracted the attention of clinicians for many years, and has passed by the terms *pulsus mitralis*, *delirium cordis*, *pulsus irregularis perpetuus* and *nodal rhythm*, all of which terms are now obsolete.

When the auricles are fibrillating, they remain in diastole; hence, the absence of the *a* wave in the plebogram and the *p* wave in the electrocardiogram. Inspection of a fibrillating auricle shows the muscular fibers in a state of constant fine, fibrillary contraction, which reminds one of the fine tremor of the muscles of

4. Jolly and Ritchie: *Heart*, 1911, ii.

5. Lewis: *Heart*, i, 1909.

the hand in exophthalmic goiter or in paralysis agitans.

According to Mackenzie, fibrillation of the auricles is found in from 60 to 70 per cent. of all cases of heart failure. I do not believe it is so common in this country. In 100 cases of heart failure of which I have graphic records, I found only thirty-five of fibrillation. That fibrillation of the auricles is a distinct clinical entity, there is no doubt. The recognition of this form of arrhythmia is of more importance than the pathological lesion associated with it, not only from the fact that the heart failure

The symptomatology is quite characteristic. The diagnosis can be made in the vast majority of cases from the arterial pulse alone, which is usually fast, 80 to 170, and completely irregular. There are seldom any two pulse beats the same distance apart. Such a marked disorder of rhythm is not closely simulated by any other form of arrhythmia. The explanation for the irregular pulse as given by Lewis is that there are multiple foci of impulse formation in the auricle and these impulses are showered in a haphazard manner on the bundle of His and carried to the ventricle. An example of this

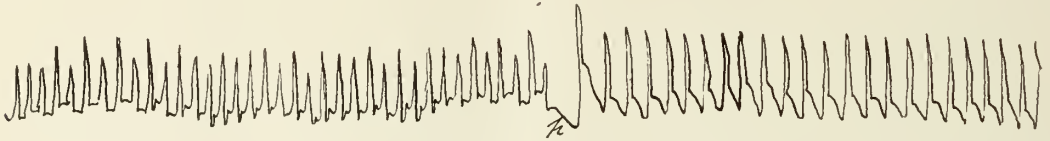


Fig. 10.—Paroxysmal tachycardia. The attack ends suddenly at the long pause "P." During the paroxysm the rate was 130 and immediately after the pause the rate is 78. The alternation disappears with the return of the normal rhythm.

may be, and usually is, the result of disturbed rhythm, but particularly because the rhythm can be influenced by drugs while the pathological lesion usually cannot.

Just why an auricle that is contracting rhythmically should suddenly cease to contract, and all fibers assume the state of fibrillary contraction, is not known. The assumption is that "the auricle is the seat of an electric disturbance of a peculiar yet distinct nature" (Lewis). It is certainly closely allied to auricular extrasystoles, paroxysmal tachycardia and auricular flutter. Its frequency in cases of mitral stenosis

form of arrhythmia is shown in Figure 11. As a result of this rapid and irregular contraction of the ventricle, there may be loss of tonicity and dilatation. The most important symptom is shortness of breath on exertion, which is usually present if the pulse rate is above 80 or 90. The usual picture of heart disease with dropsy and a swollen liver is absent, unless the heart becomes dilated. With the onset of fibrillation in mitral stenosis, the presystolic murmur, due to auricular systole, disappears, as the auricle does not contract, and is replaced by a diastolic decrescendo murmur.

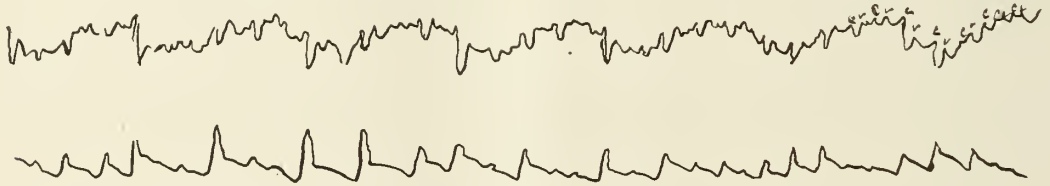


Fig. 11.—Auricular fibrillation. The arterial pulse shows complete irregularity. There is no "A" wave in the venous tracing.

would suggest irritability of the wall of the auricle on account of the increased intra-auricular pressure as a possible factor. This form of arrhythmia is extremely rare under 12 years of age. It sometimes occurs from over-dosage of digitalis, which is especially true in cases of auricular flutter, but as a rule, when the drug is stopped, the rhythm becomes normal.

The valvular lesion most often associated with fibrillation is mitral stenosis, but cardio-sclerosis in the aged has been equally as common a condition in the cases that I have seen. There is, however, no distinctive pathology. Sometimes a careful microscopical examination of the heart fails to reveal anything abnormal.

The onset of fibrillation is usually sudden, and, as a rule, persists throughout an individual's life. A few cases of paroxysmal fibrillation have been reported, but I have never seen any. The disturbance of rhythm lessens the efficiency of the heart in probably all cases. The duration of life in patients affected by it is from a few months to a few years.

It is in this form of heart failure that the best results can be obtained from the drugs of the digitalis group. In many of these cases there is no loss of tonicity or dilatation, the lessened cardiac efficiency being due solely to the rapid and irregular contraction of the ventricle. It is in this type of heart disease that digitalis causes a marked reduction of the pulse rate, while in

other forms of heart failure, with a regular pulse, the rate is influenced very little or not at all. In fibrillation cases it is usually safe to push the digitalis until it slows the pulse, unless the patient has fever.

There is much controversy over the best preparation of digitalis to use. Mackenzie, who isolated this group of heart cases as being the ones in which digitalis acts as a specific, always uses the tincture and says where it fails he has never seen results from any other preparation. Whichever preparation is used, it should be given until symptoms of its action appear, which are usually slow pulse, headache and vomiting, in the order named. Some patients require four times as much of the same preparation as others. One patient may respond in four days to one-half teaspoonful of the tincture three times a day, while another may take the same amount out of the same bottle for two or three weeks before any symptom of its action can be noticed. As a rule, digitalis or one of its allies has to be taken more or less continuously in order to keep the pulse rate at 80 or less. If quick results are desired, strophanthin may be given intravenously. I have used it in eighteen cases of fibrillation with excellent results in all, except one patient who had fever. When the pulse is rapid, $\frac{1}{100}$ of a grain of strophanthin intravenously will usually reduce the rate one-third within one hour. One such dose every four to seven days is usually sufficient. In some patients it has to be repeated every day or two. The action of strophanthin is the same as digitalis. It is easily administered, practically painless and in over 300 injections that I have given there have been no bad results.

922 Rialto Building.

RESPIRATORY DISTURBANCES IN HEART DISEASE*

GEORGE HOWARD HOXIE, A.M., M.D.
KANSAS CITY, MO.

My attention was drawn to this subject by a case in my practice, of which the following is an outline of the history.

C. R., male, aged 49, accustomed to vigorous life although engaged in wholesale merchandizing, seen first March 25, 1913, because of an attack of asthma. He had been troubled for many weeks with a "rasping in his lungs." He stated that he had been subject to bronchitis and pleurisy. Aside from his statement that he had palpitation of the heart and that his right ear "roared," his history was unimportant. Examination showed a bounding pulse of 80; temperature 98; blood-pressure 170, systolic, and 40 or

less diastolic. No normal valve-closure sounds were heard anywhere over the chest but were replaced by high-pitched musical notes. The apex beat was heaving and outside the nipple line. The right margin of the heart dulness was to the right of the right margin of the sternum. The lungs were filled with rhonchi and whistling râles. The Karrell treatment without drugs freed him of his distress. On the 27th his blood-pressure was 150 and 40, the pulse still 80. He was able to leave the house in a few days and on April 7 came to my office where his blood-pressure was 170 (systolic) and 10 (diastolic), his pulse 72. At that time the systolic sound over the sternum consisted of a dull rumble accompanied by a musical bruit while the diastolic sound was short and of better quality. He felt well. He left the city in a few days and spent the summer at a suburban lake living in a shack, doing much of his own work and free from much discomfort.

In the fall he went to Los Angeles and while there fell sick with heart trouble. He was put into a hospital and was told of his approaching end, the diagnosis being aneurysm. But he insisted on being brought home and reached Kansas City Nov. 6, 1913, in very fair condition. The nurse who brought him reported that the pulse had varied from 52 to 110, and that he expectorated blood every night—the amount of frothy blood sputum being about 2 ounces a night. His symptoms were best controlled by morphin, 1/16 grain, hypodermatically administered. His physician had been administering strophanthus, 4 drops of the tincture every four to six hours. He was greatly emaciated, very weak, and had a bedsore in his left hip. I found his pulse about 92, his blood-pressure 160 systolic, and 50 diastolic, and his temperature ranging from 97.5 to 98.4, respiration 18-24. The urine (on the 7th) showed no albumin but some granular casts, acidity 50-60, sp. gr. 1023, phosphates heavy.

The chest examination showed general emphysematous enlargement with the consequent lack of dull areas. The breath sounds were rough and prolonged, and along the base of the right lung were many pleuritic râles. The heart sounds were replaced at all orifices by dull murmurs and were of the same general character as six months before. Examination of the sputum showed a general mixed infection but no *B. tuberculosis*.

On the 9th the blood-pressure was 130. The diastolic third sound terminated at 50, and the muffled sound at 10. Temperature 96.5. Pulse 72. Urine 17 ounces and cloudy. Patient coughed up masses of mucus and blood when turned on his left side.

On the 13th he was decidedly improved. Temperature 98.4. Pulse 84. Skin of better color. Bedsore healed. Some indigestion. Was able to be put into chair. But on the 14th, during the night, he had "spells" when, as it seemed to him, his heart stopped beating and he could not get his breath (Stokes-Adams syndrome?). These attacks awakened him out of sleep and were apparently over by the time he called his nurse. His pulse, however, between attacks was the same as usual and his respiration regular.

On the 19th his feet began to swell and his temperature went to 99. The attacks of oppression at night continued. The patient would cough only when the bronchi were irritated or when he changed his position. The blood-pressure on the 23d was 150 and 70, the pulse 100.

On the 24th he exhibited during my visit the Biot type of respiration but apparently during the apneic period the pulse was fairly regular at a rate of 120. Temperature 96. The rate of respiration varied from time to time, even during the day, and the apneic periods were more frequent in the night, probably because of the decreased pressure during sleep. Atropin did not give as much relief as morphin and

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

under moderate doses of the latter the breathing was fairly regular and the sense of precordial oppression was absent. The blood-pressure remained at about 150 systolic, and 60 diastolic.

On the 26th the breath had something of a uremic odor and the urine was very scanty—only 5 to 10 ounces. Under the influence of milk diet and magnesium sulphate the amount was 15 ounces the next day. On the 28th it had reached 48 ounces. The respiration on this date varied from 18 to 32 per minute. There were no attacks of oppression.

On the 30th the pulse began to intermit. The systolic pressure was still at times as high as 152. The diastolic varied from 20 to 44. The pulse rate varied from 160 to 88.

On December 5 the periodic breathing returned, with the scanty urine, and periods of irregular heart action. Since November 13 he had shown very little trouble on the part of the lungs: no bloody sputum, no pain. The periodic respiration was again quieted by morphin and the irregular heart action brought to regularity by strophanthin (Thoms) 1 per cent. solution—10 drops every six hours.

He had another smothering attack on the 8th and by the 11th the attacks became frequent and he had become edematous to the knees.

On the 14th he had frequent attacks of periodic breathing in which the apnea would continue for a full minute. During these attacks the pulse was feeble and irregular, but did not stop.

On the 15th he became stuporous and from that time gradually sank into deeper coma until he died on the morning of the 20th.

duction of the following brief summary of my findings.

The interpretation of the irregularities of the respiratory rhythm has received rather scant attention in our literature. For years—and still in many quarters—the only type of periodic respiration recognized was the Cheyne-Stokes. But in 1876 Biot called attention to a variation of this type that he had found in meningitis in which the cessation and resumption of respiration were not gradual, but abrupt and with full-sized breaths. And in these last years emphasis has been laid on the Stokes-Adams syndrome in which we find a cessation of respiration that may or may not be coupled with a loss of consciousness.

The Cause of the Rhythm.—Recently, however, the problem of respiratory rhythm in general, and of dyspnea and periodic respiration in particular has been vigorously attacked in several different clinics, and it would seem as if we had now sufficient data for understanding the respiratory changes. Of the recent contributions the following seem to be most important:

Röver¹ discusses the causes of alterations in the respiratory rhythm. He finds that the pur-



Fig. 1.—Cheyne-Stokes type of periodic respiration.

The post-mortem examination (10 hours after death and after embalming) showed the right lung adherent on all sides. The lower lobe was of the consistency and appearance of spleen and tore in removal from the posterior wall. The upper lobes dripped foam. One scar at apex. The left lung was adherent to the pericardium and posteriorly along the median line. Along this line was an abscess sac from which pus had apparently been emptied by the embalmer. The whole left lung except this small area was filled with foam. In this area (perhaps 1 by 4 inches) the same splenic infiltration was observed.

The heart was large—some six inches in horizontal measure. Left ventricle hypertrophied. Right atrium greatly dilated. Coronary arteries sclerotic but still patent. Mitralis atheromatous and insufficient. Aortic valve stenotic and dilated. Aorta dilated and studded with patches of yellow as well as of white thickening. The patches were not stellate, but had their axes parallel to the course of the vessel.

Abdominal organs normal except for congestion. Kidneys showed small infarcts.

The heart muscle was degenerated and along the area of the bundle of His were patches of calcification; but the bundle itself seemed intact.

The findings were so different from those usually prophesied in cases where the Biot type of respiration occurs that I began a search of the literature for an explanation. And because I believe that others may have to face a similar problem, I ask your indulgence for the intro-

• pose of respiration is the arterializing of the blood, not the excretion of the CO_2 . The respiratory center is stimulated by the circulating acids. If oxygen is lacking, if the partial tension in the blood is too low for oxygen to flow into the tissues, a suffocation, an asphyxiation, of the tissues including the respiratory center follows.

In such case the presence of other acids, acids formed by the incomplete oxidation of the tissues, furnishes a stimulus to extraordinary efforts at ventilating the lungs. The purpose of this effort is not to reduce the acidity of the blood or to expel the CO_2 , but rather to bring oxygen to the tissues. For example, in such diseases as diabetes, the acids in the blood are so much more powerful in their attraction to hemoglobin than the CO_2 that the latter cannot unite with the hemoglobin of the blood. It follows again that the blood does not drain the CO_2 out of the tissues. Therefore the oxygen cannot gain entrance to the tissues. It follows again that the tissue combustion is incomplete and the end-products of CO_2 and water are not reached, and the acidosis is increased. Therefore, in

1. Zeitschrift für klinische Medizin, lxxvii, 228.

order to overcome this asphyxiation of the tissues the blood is hurried through the arteries and veins more rapidly and the respiration increased—all usually without result. In gout a similar condition prevails on account of the uric acid increase. So this theory checks at least for these two diseases and seems plausible enough to be considered as the real explanation. This forms the chemical basis for the respiratory rhythm.

Dyspnea in Heart Disease.—Siebeck of Heidelberg, and his pupil Reinhardt, have taken up the specific problem of the variations of respiration in heart disease. Their work has been experimental and may be outlined as follows: Siebeck² finds that in cardiac dyspnea, the real capacity of the lungs is decreased. This is brought about by increased rigidity of the walls. Next he finds that the mixture of gases in the alveoli is not uniform, as in normal lungs. And third, more of the inspired air is immediately breathed out than in normal lungs. This causes the oxygen of the inspired air to be less fully utilized than in normal lungs. Furthermore, there is less CO₂ breathed out than normally, and for this reason also the blood (and there-

capacity little CO₂ retention exists; on the other hand in some cases enormous overflow occurs.

It follows, therefore, that the purely mechanical interference with the respiration found in cardiac insufficiency is sufficient to explain the occurrence of cardiac dyspnea. On the other hand, the work of Porges, Leimdörfer and Markovici⁴ shows that the alveolar gas-tension is decreased. Cardiac dyspnea is therefore comparable to that due to lack of oxygen, or to that in acidosis (Haldane). Therefore, in cardiac dyspnea two factors are present: (1) the mechanical and (2) the chemical.

The matter of acidosis in cardiorenal patients is discussed by Lewis.⁵ He calls attention to the two types of dyspnea: (1) those with and (2) those without cyanosis. In the latter type he finds a decrease in the alkalinity of the blood. The cause of the increased acidity of the blood lies, of course, in the incomplete combustion and excretion of the proteid molecule. In such cases the morbid anatomy at the post-mortem examination is not commensurate with the amount of functional disturbance. It follows, therefore, that in such cases the dyspnea is capable of being ameliorated and need not



Fig. 2.—The Biot type (downstroke shows inspiration).

fore the tissues) of cardiopaths contains more CO₂ than that of normal persons. All these factors bring about the increased activity of the lungs in order to equalize conditions.

Reinhardt³ brings Siebeck's investigations to more definite conclusions. Stated categorically, they are:

1. The vital capacity of the lungs in all cases of cardiac insufficiency is lowered, in some cases from 20 to 25 per cent. of the normal.

2. In the lighter cases, and in all cases where the congestion includes only the peripheral circulation, the change in respiration is small.

3. In all the more severe cases, the ventilation of the lungs is rendered more difficult, and this shows itself as cardiac dyspnea. This consists in an increase in the volume of air respired, which is brought about by an increase in the frequency with the maintenance of the normal depth of the individual breath.

4. The experiments in breathing in air containing increased percentages of CO₂ show (a) that in severe cases less CO₂ can be endured; (b) that a percentage of CO₂ much lower than normal is sufficient to cause an increase of the respiratory effort; (c) the absolute CO₂ values show that in the severer cases with reduced vital

therefore be of such grave prognostic importance as the dyspnea of the other type.

Causes of Periodic Respiration.—Eyster⁶ calls attention to another factor in rhythm disturbances, and that is the relation of blood-pressure to periodic respiration. His point was that periodic respiration occurs whenever the blood-pressure alternately rises and falls above and below the level of intracranial pressure. The respirations become active with the rise and die away with the fall of blood-pressure. This finding shows that even in intracranial types of periodic respiration the heart and vasomotor system are of distinct influence.

More recently Clark and Hamill have published⁷ their observations of circulatory changes in cases of periodic respiration. Their first case shows a Biot type of respiration and the post-mortem examination revealed myocardial degeneration as the essential lesion. This tallies closely with my case.

In the same journal (p. 393) Barbour shows that in all periodic respiration the cardiac element is essential. He distinguishes the two types of periodic respiration as (1) the cardiac, and (2) the vasomotor. The blood-pressure in

4. Zeitschrift für klin. Med., Band 77, 1913, p. 447.

5. British Med. Jour., Nov. 29, 1913, p. 1417.

6. Jour. Exper. Med., 1906, viii, 565.

7. Jour. Pharm. and Exper. Therapeutics, March, 1914, p. 357.

2. Deutsches Archiv für klin. Med., cvii, 1912, p. 252.

3. Deutsches Archiv für klin. Med., Band III, p. 465.

its relation to intracranial pressure is, however, in both types the determinant factor in the production of periodicity. In the cardiac type the blood-pressure falls near the end of apnea and rises when the respirations become weaker. In the vasomotor type the blood-pressure rises near the end of apnea, only to fall soon after the first respiration. Of course, a depression of the medulla (as by morphin), or of the heart muscle would initiate or influence markedly such a periodicity.

Hoover's remarks⁸ constitute the only clinical discussion of apnea in cardiovascular disease that I have found. There are several reports, however, where a Stokes-Adams syndrome has been noted and yet no injury to the bundle of His found at the post-mortem examination. This fact emphasizes again the importance of studying more carefully the respiratory irregularities of our patients, for the very good reason that entirely different measures should be taken to combat a heart-block from those needed for apnea caused by medullary anemia.

Hoover's remarks are so pertinent that I wish to quote them:

"In cardiovascular disease we see occasional lapses of respiratory activity which assume either Biot's or Cheyne-Stokes type of respiration. A man, 60

est sign of impairment in the gross hydraulics of his blood circulation so far as the right heart, pulmonary circulation, liver or the pendant parts were concerned. There were no signs of respiratory involvement during his waking hours, but the instant the added factor of sleep ensued there was induced a sufficient anemia of the respiratory center to cause apnea, and automatic respiration was resumed only after the partial pressure of carbonic acid in the blood reached a point sufficient to arouse his depressed respiratory center to action. This train of events explains those cases of arterial sclerosis which waken with suffocation during the early hours of the night when sleep is most profound, and when examined during their attacks reveal no signs of pulmonary stasis, no emphysema or bronchial râles and no change in character or rate of the arterial pulse. It is not a dyspnea; it is a prolonged hyperapnea, and has for its basis circulatory changes in the medulla which are not sufficient to produce symptoms during the waking hours, but with the diminution of blood supply to the encephalon which comes with profound slumber a sufficient anemia of the medulla occurs to produce hypesthesia of the respiratory center.

"All the cases of Cheyne-Stokes respiration which are produced in cardiovascular disease by the injection of small amounts of morphin occur in elderly people or patients with arterial disease. In all these patients we have the cumulative effect of morphin on a respiratory center already affected by an impaired blood supply. The patient above described recovered from his respiratory symptoms after taking nitroglycerin and caffein citrate, a further proof of the theory I have presented.

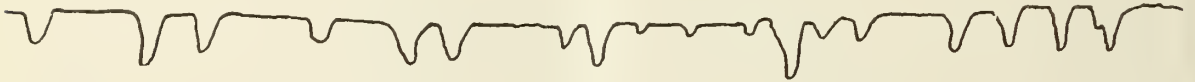


Fig. 3.—Another form of the Biot type (downstroke shows inspiration).

years old, with chronic aortitis, general arterial sclerosis, chronic interstitial nephritis and moderate hypertrophy and dilatation of the left ventricle, had for three months been suffering from nocturnal dyspnea, followed by prolonged apnea. For a year the patient had wakened frequently at night suffering from intense air-hunger; after breathing deeply for several minutes he would be able to go to sleep and rest for the remainder of the night. These attacks all came during the first hours of sleep. For three months he had been greatly distressed by complete suspension of respiration directly he fell asleep, and then awakened with intense air-hunger, which was relieved after a few minutes rapid deep breathing.

"It was discovered he could avoid this period of intense air-hunger if he were awakened directly apnea commenced. So his wife would watch him as he fell asleep and waken him the instant respiration ceased. This plan enabled the patient to escape the period of air-hunger which always followed spontaneous awakenings. Very commonly he would have to be awakened as often as a dozen times before respiration would continue after falling asleep.

"This patient presented a type of Biot's respiration, a modification of Cheyne-Stokes respiration in which apnea and hyperapnea alternate without the gradual increase and diminution in rate and depth of respiration which intervene between the periods of apnea in Cheyne-Stokes phenomenon. Owing to sclerosis of the basilar arteries with consequent impairment of blood supply to the medulla he suffered what may be termed intermittent claudication of the respiratory center. There was not the slight-

"A man, 71 years old, had Biot's type of respiration, i. e., sharply alternating periods of apnea and hyperapnea. The periods of apnea lasted as long as sixty-seven seconds. There were clinical signs of arterial sclerosis, high blood-pressure, pulse of long duration, hypertrophy and dilatation of both right and left ventricles of the heart, and renal infarcts. During the periods of prolonged apnea the patient talked irrationally and incoherently; during the periods of apnea there was profound slumber. This clinical picture had continued for nearly three weeks when nitroglycerin, 1/100 gr. every hour, and 5 gr. of caffein citrate every three hours, were given. Though there was moderate edema of the legs, the improvement which followed the treatment could not be ascribed to increased renal elimination. Biot's respiration ceased and the mental symptoms all disappeared within a few hours. The patient died suddenly two days later with symptoms of embolus in the pulmonary artery."

CONCLUSIONS

We may conclude then that in cardiac cases two factors are at work in the production of irregular respiration. They are, first, the mechanical insufficiency of the lungs because of the damming back of the blood in the lungs and of the lowered blood-pressure; and, second, the oxygen lack at the medulla. The first is mechanical and the second is chemical. The first produces increased efforts at respiration

8. Jour. Am. Med. Assn., July 20, 1907, p. 237 et seq.

(or cardiac dyspnea) and the second brings about the periodic respiration. Hence in the different cases we may have either the dyspnea or the periodic respiration, depending on the condition of the blood-pressure, of the arterial system and of the heart muscle.

Added to these factors is the acidosis due to insufficient combustion in the tissues. This complicates the situation in many cases and may become so marked as to bring about the dyspnea of itself in diseases where the heart is apparently still competent.

It follows, therefore, that in the dyspnea of cardiac patients the inhalation of oxygen may be of great benefit. By increasing the oxygen tension or partial pressure more oxygen will be taken up by the blood, more passed to the tissues and to the respiratory center, and the chemical cause of the dyspnea removed.

Inasmuch as there are several factors at work in the production of periodic respiration, the early recognition of the type of respiration will enable the clinician to prolong life by taking measures to remove the factors at fault, e. g., stimulate the heart action with digitalis or increase the blood-pressure with pituitrin, or lower it with the nitrites, or reduce the acidity by administering alkalis, or attack the oxygen-lack directly by administering oxygen itself, as the circumstances may permit.

In my own case the use of alkaline diuretics gave complete relief for several days; at other times the strophanthin; and finally the deadening of the reflex centers with morphin accomplished the same purpose.

1334 Rialto Building.

DISCUSSION

DR. W. G. MOORE, St. Louis: I believe that such papers as the two that I heard should not go undiscussed, and I wish I could add to the value of them in what I wish to say. I heard the last two; the others I missed, but those were the ones that contained the core of interest from my point of view, that of Dr. Neilson of St. Louis on the treatment of cardiac diseases, perhaps, especially. This is an age of specification, of specialization, and, I believe, an age of therapeutic destruction in many ways. The remarks of Dr. Neilson regarding digitalis were interesting as far as they went and scientifically correct, I have no doubt. They did not go far enough. They were not specific enough. He named, for instance, the varieties of digitalis in which he believes. I would have liked it better if he had insisted on one of these agents which he liked best of all and had stated why he liked that best. I believe that the best public teacher, perhaps one of the best that we have in this country for the medical profession, is Dr. Cabot of Boston, and most of his teaching to-day, so far as I can see it, is unteaching the fallacies of yesterday. When a man hears a murmur in the heart, he naturally concludes that his remedy is digitalis, and he fires away with the tincture or the infusion or some of the modern changes of that great remedy. I believe, also, that Dr. Cabot emphasizes the effect of one of the best remedies known in the treatment of heart disease, as far as my personal knowledge goes, namely, morphin. Now you will prick up your ears

and say, "Well, but the danger of morphin!" I say, "Well, but the danger of heart trouble, too!" I place morphin in its beneficence, with its possible dangers, against the dangers of heart lesions affecting the heart in American citizens to-day. The nervous system is responsible for much of the heart disease that we see and morphin is an agent which "knits up the raveled sleeve of Care." If you rest this tired and exhausted nervous system, you will frequently ease the intermitting heart. It will immediately cease to intermit, because it is being rested therapeutically. You will find that men are resorting to this for relief without suggestion, an unfortunate thing to do unless they are held within bounds, which is a difficult thing to accomplish.

Now, I had hoped that at this symposium, which was one of the attractive features of the meeting to-day, I would hear some of the up-to-date sons state the up-to-date reasons and tell how to control these difficult conditions, which I did not hear, except in a limited though excellent way. Why should strophanthus be substituted for digitalis? When should these other drugs be substituted, if they should be? Specialize, if you please, you gentlemen that treat heart troubles. But one thing is clear to me; that is, you have got an organism that has a gastrointestinal canal of tremendous importance and that is being treated from the rosy lips to the other extremity in a multitude of ways sound and unsound and many of which, as the essayist says, are the determining factors.

Then, in short, rest the nervous system as far as possible, eliminate alcohol and nicotine and cocaine and the other cherubs that the law permits to exist and be men enough to rise up and say that alcohol is over cancer and cardiac disease and tuberculosis the king of destroyers among men. There are men here who know what forces are against this, and if you will simply concentrate your mind on what men are afraid of politically—medically and otherwise—you will see that that is the core of the whole business and terrorizes the man who hopes to be some day a little peanut politician against doing his duty to science. That is the thing that they tremble at, some hoodlum with a saloon is the master of the situation, that some gang—now, that is as far as I am going in that direction, but *there* is dispensed one of the *greatest* producers of cardiac disease. I believe that the gentlemen who have read the papers, from their experience will agree with me. "Drug habits" are filling the columns of our newspapers, through the instrumentality of the women of this country, who in a brilliant way demonstrated that they know how to act and what to do with the vote in our sister state of Illinois two weeks ago, something has been done in the saloon direction. "Drug habits"—they don't say "alcoholism"—the newspapers are full of the "drug habit." What is the difficulty? They fail to mention the one thing that is the most powerful. They will mention cocaine and chloral and morphin, and all of those, but watch them and see whether they mention alcoholism or not. Not one of them! There are your greatest etiologic factors, gentlemen, in many of these cases, and if you observe carefully and eliminate those that you know are deleterious and use the agents that are beneficial you will add to the comfort of those who suffer from cardiac disease.

DR. JOHN R. HALL, Marshall: I rise for the purpose of commending this series of papers and desire to say that having been a member of this association for years I have never heard six papers of so universal and great value read as these we have heard this morning.

I wish especially to speak of and commend the remarks of Dr. Neilson of St. Louis in regard to cardiac neuroses. I have seen many such cases attributed to neurotic troubles, in which a more care-

ful examination showed that many of them were organic in their causation.

I also wish to say that if you really need a heart remedy, that after all of them have been tried, digitalis must be the sheet-anchor, and yet I also want to say that I have seen many hearts injured by the injudicious use of digitalis. In reference to troubles with the lungs in heart cases, I have recently seen a case in which digitalin was tried and various other remedies and there was finally resorted to the old remedy, the infusion of digitalis, and I saw an area of dulness of 6 inches posteriorly in both lungs reduced to the lower section of the lung, not occupying more than 1½ inches, in sixteen hours under the infusion of digitalis.

I also want to refer to the point of the use of morphin, brought out by Dr. Moore. After all is said and done, in many of these cases you have to resort to morphin, and it is highly commended by Oertner of Vienna and also by his reviewer, Dr. B. Potter of New York.

DR. T. G. HETHERLIN, Louisiana: I want to say in regard to the treatment of heart trouble that many times when the system is edematous you can play the mischief with your digitalis. Babcock of Chicago recommends unloading the system first, probably through the kidneys. Oftentimes when it is unloaded, the heart will go to work very readily without any other medication. Digitalis is all right in its place, but its place is not in all cases.

DR. G. CANBY ROBINSON, closing: I was very much interested in the point of view that Dr. Murphy brought out concerning the heart and its nervous control. The rate of the heart is controlled on the one hand by the vagus and on the other by the accelerators. There are certain types of heart disease where the heart is beating too rapidly, and the rapidity of the heart-beat seems to be an important factor in the disability of the circulation. That rapidity of the heart-beat is seen in conditions such as endocarditis in children and especially in exophthalmic goiter, and I became interested in the attempt to control the rapid heart through the stimulation of the vagus by drugs. I chose aconite, because it is shown by Mathews experimentally that aconite stimulates the vagus center. A preparation of tincture of aconite was obtained directly from a very good manufacturer, who furnished the date of preparation and the result of the chemical assay. The tincture was administered to a series of five cases of exophthalmic goiter. We found that the tincture of aconite, when used in ordinary doses, produces no effect, so we increased the dose. We started with 10 drops given three times a day, and we increased the dose gradually until the patients were taking 10 c.c. or 150 drops every four hours, without any effect in any way. We then had the tincture of aconite assayed by an expert pharmacist, who found that it contained approximately the proper amount of aconitin to fulfil the pharmacopeial requirements. We then determined the minimal lethal dose of the tincture of aconite and found that the tincture fulfilling the pharmacopeial requirements was scarcely toxic in such doses as could be administered subcutaneously to guinea-pigs.

Two hundred grain guinea-pigs survived 3.6 c.c. of the tincture subcutaneously administered. It shows how careful we ought to be in the use of drugs, and how necessary it is that some of our drugs be tried out physiologically instead of depending on chemical assays. I think that we must still go on and search for drugs that will control the heart-rate through the nervous system. If we could raise the vagus tone it is probable that the cardiac rate would be successfully controlled thereby. I feel that digitalis is a very important drug, but that we should not feel satisfied with our cardiac therapy as it stands to-day.

CANCER OF THE CECUM IN RELATION TO APPENDICEAL LESIONS*

PAUL Y. TUPPER, M.D.
ST. LOUIS

Recently much laboratory study has been directed to small nodules frequently found in the appendix. These are discovered in cases of apparently simple uncomplicated appendicitis. They are usually located in the distal extremity of the organ and are frequently so small as to escape casual observation. To the touch the nodules are hard. On section they are generally yellow in color, but sometimes reddish gray. They have been found associated with appendicitis at all periods of life from extreme youth to old age, but by far the larger number of recorded cases are in those between the ages of 20 and 35 years.

There is nothing generally in the early clinical history of the case to differentiate it from one of simple appendicitis. The comparative youth of the patient, the absence of cachexia, the failure to find at the time of operation any infiltration of adjacent structures or metastases, and the latency of the course of the disease, present a picture distinctly at variance with that of carcinoma elsewhere in the economy. The definite diagnosis of malignancy is first made in the laboratory and is often not even suggested by the macroscopic appearance of the specimen removed. Because of these clinical characteristics many authorities have classified these growths among the endotheliomata, which in the laboratory are hard to differentiate from epithelioma and carcinoma. Alexander Bryan Johnson says of endothelioma: "They occur partly as distinct tumors and partly in combination with various forms of carcinoma. Some of these tumors remain encapsulated and are only moderately malignant or even benign; others run a course closely resembling that of carcinoma." In his discussion of tumors arising from the endothelium, Hertzler says of the latter structure: "Standing midway between epithelium and connective tissue, the tumors arising from it may be expected to maintain a corresponding relationship to epithelial and connective-tissue tumors. The deviation in structure from either of these is less than they are from each other. Naturally, the resemblance to either the carcinomata or the sarcomata becomes closer when one or the other of the normal functions is emphasized. Thus if for any reason the connective-tissue forming properties are brought to the foreground, it will not be surprising if the sarcoma should be closely imitated."

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

Thus it is seen that differentiation between endothelioma and true cancer of this portion of the bowel is rather clinical than microscopical. Difference of opinion exists between observers regarding the priority of the inflammatory and the malignant process in the appendix. Zaaijer admits the existence of appendiceal cancer and considers it the result of years of chronic inflammation of the organ. Versé and Lazatto both think the new growth primary in character and the inflammatory process secondary. The former calls attention to the fact that cancer has not infrequently been found in operation for the first attack of appendicitis with no history of previous disturbance at that site.

Consensus of evidence, however, seems to point to a preexistence of the inflammatory process in the organ resulting in cicatrization and in obliteration of its lumen. In the MacCarthy and McGrath statistics from the Mayo Clinic one in two hundred and twenty-five appendices removed showed cancer on laboratory investigation.

Heyd, in the *Post-Graduate* (June, 1912) makes the broad statement that one in every fifty-three partially or completely obliterated appendices shows some malignant degeneration.

That malignant new growths are frequently found in the appendix there is abundant evidence. It seems equally patent that though the etiology of the neoplasm may in no way be out of the ordinary the clinical history it presents is in direct variance with the deportment of true cancer elsewhere. The absence of the characteristic tendency of cancer to involve adjacent structures by infiltration, to metastasize, to produce cachexia and to recur after removal immediately challenge the attention alike of the clinician and the pathologist. The most rational view of the subject seems to be that, while the new growth shows, pathologically, elements characteristic of malignancy, it is of slow and unobtrusive growth and clinically benign in its attitude toward the economy.

Authorities agree that cancer of the cecum is rarely found secondary to that of the appendix. This is probably because of the reasons above stated. Moreover, the appendiceal lesion under discussion rarely gives rise to glandular enlargements in the meso-appendix and elsewhere. Therefore, by the simple appendectomy ordinarily done the trouble is compassed, there seemingly being no inherent tendency of the disease to recur in these cases.

Bearing specially on the questionable relationship of appendiceal and cecal cancer are the records of two cases that have come under my observation recently.

CASE 1.—On June 26, 1913, Dr. J. Homer Butler of Hartsburg, Ill., referred H. K. to me for advise regarding a tumefaction in the ileocecal region. The patient

was 58 years of age and of slender build. He had had, during the six or eight months previous, three characteristic attacks of appendicitis. The last attack had been more serious than its predecessors, confining the patient to bed for about ten days and accompanied by more pain, fever and muscle-defence. At this time a mass could be distinctly felt and this did not become less with the subsidence of the symptoms mentioned. No blood was found in the stools. After observing the patient for several days and stating to him that the condition was, in all probability, more serious than a chronic appendicitis and securing his consent to do what was necessary for his relief, I operated at the Deaconess Hospital, July 1, 1913. The general condition of the abdominal cavity was good. In the iliac basin, however, was found a hard irregular tumor approximately 2 by 3½ inches in size involving the caput-coli and loosely attached to adjacent structures by recent inflammatory adhesions. The appendix or its remains could not be made out, evidently being incorporated in the tumor growth. The tumor was palpably cancerous. No secondary glandular involvement or surrounding tissue infiltration being discernible, the tumor seemed favorable for radical removal. This was done by severing the ileum and its mesentery 3 or 4 inches proximal to the ileocecal junction and also the ascending colon at a like point above the cecum. The severed ends of the ileum and colon were closed and inverted and a lateral anastomosis made by suture after a complete removal of the tumor-mass. The patient recovered satisfactorily and returned home four weeks after the operation. I have seen him recently and he is apparently well, having gained ten or twelve pounds in weight. At the site of the bowel excision no mass or induration can be felt through the parietes. The tumor proved to be an adenocarcinoma. The appendix or its remains could not be defined in the tumor-mass.

CASE 2.—Dr. Marshall Baker of Webster Groves, Mo., referred Mrs. B. D. to me March 21, 1914, for a tumor in the ileocecal region causing chronic bowel obstruction. The patient was 57 years of age and was thin and of a cachectic appearance. She had a history of more or less characteristic appendiceal attacks extending over many years. Several of these had been observed by Dr. Robert Lardner Gibbon of Charlotte, N. C., who opened the abdomen for the removal of the appendix in the fall of 1913. At this time a tumor mass could be defined at the appendiceal site. Dr. Gibbon writes that he found a hard nodular mass involving the cecum and having attached to it a remnant of an almost completely destroyed appendix which was so friable as to become detached from the mass on handling. In the laboratory this proved cancerous. The tumor mass was also palpably malignant. Not having previously gained the consent of the patient to do as radical an operation as the case demanded, he closed the abdomen and sent a report of his findings to Dr. Baker. At that time obstructive symptoms had not asserted themselves, but when the case came to my notice these were becoming quite marked. The passage of gas would be distinctly arrested at the ileocecal junction causing colicky pain which was relieved only after the constriction was passed. Hoping to be able to remove satisfactorily the malignant growth I operated at St. Luke's Hospital March 14, 1914. I was disappointed in this. The tumor, though not large, involved almost the entire caput, attaching it to the iliac basin and presenting a well-defined induration of the tissues at or about the point of attachment. The site of the removal of the appendix was not discernible. I had to content myself with making a suture lateral anastomosis

between the ileum and the ascending colon. Immediately following the operation there was relief from the obstruction symptoms and the patient left the hospital five weeks later in as favorable a condition as could be expected. When seen a few days ago she was looking far better than when operated on and had gained somewhat in weight.

CONCLUSIONS

Malignant disease of the appendix is not uncommon. The new growth cannot be clearly differentiated from carcinoma microscopically, but clinically its deportment is definitely that of the endotheliomata elsewhere in the body. The malignant process is probably grafted on the appendix that has, as the result of inflammatory action, undergone cicatrization and partial or complete obliteration of its lumen.

The removal of the involved appendix generally compasses the trouble, as secondary glandular involvement and metastases are rare.

In rare instances the cecum seems to have been involved secondarily to and as the result of the cancer of the appendix, but definite proof of this is wanting.

Wall Building.

DISCUSSION

DR. E. A. HERTZLER, Kansas City: I would like to add a few remarks. I believe this statement of Dr. Tupper's rather confuses the general situation. The specimens he has described are exceedingly rare. The so-called carcinoma of the appendix which one reads of in the literature is totally different from that which Dr. Tupper describes. His belong distinctly to that very small group of cases that are actually carcinoma. The vast majority of the specimens so described are not enlarged or only very slightly enlarged appendices, and one finds only a small group of epithelial or epithelial-like cells in the appendix. I was struck on examining some intestinal diverticula to find these same structures in the obliterated portion of the gut. The structure of the so-called appendiceal carcinoma is very much like it. They are not histologically different, the chromatin arrangement does not differ from the normal epithelium, and there is no evidence that there is or has been any actual proliferation. I have in my possession an appendix that shows distinctly a small diverticulum of the appendiceal lumen which imitates very closely the same structure, and if I had not found the exact point of origin from the appendiceal lumen I should have assumed that it belonged to this class of tumor. The very fact that they are clinically innocent, except in these very rare cases in which malignancy has taken place, makes it incorrect to class them with carcinoma. The question is, are we to consider it as a malignant tumor, because it conforms to some of the grosser anatomical points? Obviously not. The term "carcinoma" has a clinical significance, and if applied to conditions which have no disposition to become malignant and destroy life is applied wrongfully.

Dr. Tupper's contribution is therefore very valuable because it emphasizes the difference between the genuine carcinoma such as he describes and the pseudo type, which I have just depicted, which makes up the vast majority of the cases reported in the literature.

TREATMENT OF MIGRAINE*

GIVEN CAMPBELL, M.D.
ST. LOUIS

There are probably very few of us who do not encounter patients suffering from periodical headaches. Often it is a woman, whose headaches may or may not occur at the time of her menses. If menstruation be the exciting cause the periodicity of the headache is, of course, regular. Quite often, however, such association does not occur. Nor in fact are all headaches occurring at time of menses migrainous in nature. In these latter cases and in most cases in males the interval between the attacks is somewhat irregular. The headache is variously denominated as sick headache, nervous headache, stomach headache, etc.

The pain may be limited to one side of the head, and it is because some cases have this distribution that the names migraine and hemicrania have been given to these headaches as a class, the majority of which, however, do not in my opinion show such limitation. People suffering from such headaches give a history of an onset usually in adolescence, often in childhood and rarely after thirty.

The headaches as a rule cease or grow much less troublesome as middle age merges into later life with its less sensitive arterial response to vasomotor influences.

A marked heredity is the rule, the disease often being traced back through several generations and it is noteworthy that along with the family and personal history of such headaches there is usually encountered an accompanying history, both family and personal, of that condition of metabolism in which the so-called purin bodies play a prominent part in auto-toxemia.

Such patients develop vasorenal degenerations early, and it is not very uncommon to find a trace of albumin and a few hyalin casts in the urine of a patient, present only during an attack of migraine, in whom no other signs of impending mischief in the kidneys can be made out. It is also noteworthy that in the majority of such patients the pulse tension increased anywhere from 20 to 30 and often 40 millimeters of mercury during the attack of headache.

A description of an individual attack is about as follows: The patient after several days or weeks of complete immunity develops a heavy feeling in his head, often accompanied by an undue sensibility of the skin, of the face and neck so that a fly alighting in such a location will tickle more than usual. Often there is slight photophobia or exaggerated distress from ordinary noises.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

This shortly develops into a definite pain usually in the entire head, and not accurately localized, but often limited to one side. This pain increases and reaches its acme in a few hours and lasts for a period varying from a few hours to usually not longer than twenty-four hours. At the acme the pain is severe and of a throbbing character, and in many patients with the headache is at its climax, there is nausea and vomiting, which is an indication of the climax of the attack rather than a cause of its subsidence.

The face is usually pale and the extremities cold and the pain is accentuated if the patient assumes the recumbent posture. Occasionally, patients will have a flushed face with their attacks, with a probable relaxation of the arterial system, and the few patients I have seen with this type were not made worse by recumbency.

Following its acme, the symptoms subside more speedily than they came on, and the patient more or less rapidly becoming comfortable often becomes drowsy or may be able to fall asleep, and it is noteworthy that on the day after a severe attack the patient often feels unusually well, the headache seeming to have cleared the mental atmosphere as a thunder-storm clears the physical atmosphere.

Occasionally, in adults and most often with migraine when found in children there are certain focal sensory phenomena which occur as auras of the attack. The clinical picture then corresponding to what is termed ophthalmic migraine, since the sensory disturbance is usually in the visual cortex of one or the other side. In such a patient all objects to one side of central vision begin to look dim or in that side of the field of vision there may be spots where vision is interfered with by what seems a shimmer interposed, resembling the reflection cast on the ceiling of a room when the sun shines on a pail of water, or the glittering scotoma may be zig-zag in outline or bordered by prismatic colors, or vision may entirely fail in the one side producing a temporary hemianopsia. These disturbances last but a few minutes and are promptly followed by the headache which in this type of case is always located on the side opposite to the disturbance of vision.

Occasionally the aura in place of involving the visual cortex may produce perversion or inhibition of general sensibility of the cortical type in an arm, a side of the face or an entire side of the body opposite to that of the headache or in left-sided headaches there may be with the visual or general sensibility disturbances on the right, a sensory aphasia or agraphia. All these disturbances are transient and soon yield to the oncoming headache. Although as in epilepsy, to which this type of migraine presents many resemblances, these

aurae may occur and yet not be followed by the fully developed attack of headache.

It is among these abortive types that we find the so-called migraine equivalents often presenting diagnostic difficulties, and a stumbling block to the unwary. To illustrate: A patient was seen by the writer some years ago. A girl, age 18, suffering for the past four years from periodical attacks some days apart, consisting of a sudden sensation in abdomen compared to nausea, puts her hand to her mouth, lies down at once, all is over in a few seconds, and attack is followed often by somnolency and occasionally by headache. The writer diagnosed it as *petit mal* and said he felt sure such diagnosis would be confirmed by any competent neurologist. The people having means decided to have this opinion confirmed and consulted a neurologist—a thoroughly competent man. He, forming his opinion independent of a knowledge of any previous diagnosis, decided it was migraine. This, of course, complicated matters, and to settle the question the patient saw a third equally competent neurologist, and he brought order out of the confusion by a diagnosis of hysteria. While the difficulties are not often so extreme as in this instance, the fact remains that many cases of apparently causeless periodic nausea or cyclic vomiting are really an abortive form of migraine, and that in many migrainous individuals there is a more or less chronic interparoxysmal condition of mental sluggishness and malaise, mistaken for neurasthenia which, while of course, not a protracted headache, is a part of the general toxic state acting on a central nervous system in which is present the migrainous instability. And again while a migraine headache is usually limited in its duration to a period not longer than twenty-four hours one can have what is called a migraine status, comparable in a way to status epilepticus in which the patient passes from one migraine headache into the next before recovering from the preceding one, and may in this way continue in a constant headache for a week or more at a time.

Headaches with these auras represent an interesting but also an unusual type of migraine. It is rare to find the above-mentioned auras as invariable precursors of the headaches, but on the other hand it is probably almost equally as unusual to find a patient with headaches migrainous in nature in whom at some period of his life there has not been some hemianopic visual disturbance with at least a few of his headaches. Cabot in his book on "Differential Diagnosis," refuses to class as migraine any headaches in which sensory auras do not occur and for lack of a more definite etiology refers to the others which might be classed as migraine merely as (to quote his words) "headaches

occurring in lazy, constipated, gluttonous, people." And while the writer, himself a victim of migraine, but with perhaps enough visual auras to redeem him from Cabot's opprobrious epithets, hardly agrees that the generalization should be so sweeping, the wording is excellent in that it emphasizes much that is valuable in the treatment of most cases of genuine migraine as well as in those Cabot would not so classify. In fact, the three words could well be taken as a text for perhaps the most important part of the treatment of migraine; Lazy, constipated, gluttonous, for it is certain that sufficient outdoor exercise, free elimination in the broadest sense, and a carefully prescribed diet, abstemious in general and carefully limited in certain particulars, does more in the long run to relieve the attacks than can be accomplished by treatment along any other line. For while migraine is probably a degenerative neurosis bringing with it some inherent, instability of the brain by which it is possible for exciting causes to produce a migraine attack in a predisposed individual where similar causes acting in another person not so predisposed would have no such effect, and while that *inherent*, cortical condition will persist and the patient may from time to time continue to have slight attacks, the *exciting* cause will be so far removed that the headaches will cease to be of consequence, and, what is of far greater importance, the tendency to early vasorenal degeneration will be checked.

But generalizing as to what ought to be done is easy. The seeing to it that it *is* done, is quite another matter. Especially in a condition like migraine, where the patient feels well between attacks often far apart and which in themselves are to him only a source of suffering and temporary disability, not an indication of future danger to his health.

It is because this view is so frequently shared by patient and physician alike, that in many instances treatment is limited to relief of the attack by some of the too numerous and perhaps too easily efficient analgesics of the coal tar type. It is not in migraine alone that we overlook the importance, yes even the value of pain as a defensive element in life processes. Any one not familiar with the work is urged to obtain and read a book by Dr. Hilton, an old medical book, but one far from having outlived its usefulness, entitled "Rest and Pain."

But while the too ready resort to the analgesics is to be condemned, there are many cases in which the attack of headache must be relieved, and the writer for this purpose is in the habit of using phenacetin in the following manner: Four 5-grain tablets are *given* to the patient, not prescribed. He is instructed to put one in his mouth and eat it as he would a peppermint lozenge, using no water. There seems

no doubt but that phenacetin acts better and more promptly given this way. It is certain that some at least is absorbed by the pharynx and throat tissues as the local anesthesia of these parts thus produced is readily observable by most patients, and any part thus absorbed enters the circulation direct, not having to first pass through the liver. In addition, there is probably more rapid absorption from the stomach. The first dose will usually relieve the headache either permanently, or for a period of about three hours, when if necessary it may be repeated; if, however, the first tablet does not bring the expected relief, the patient is directed to take a second in similar manner half an hour after the first dose, and a third an hour after that one, if not sooner relieved, but not to use more than the four in twenty-four hours. While the indiscriminate and especially the too frequently repeated use of such remedies without medical direction is to be strongly condemned, the occasional employment of phenacetin even in quite full doses and in patients suffering from pronounced valvular disease of the heart, in whom compensation is good, is attended with less danger than is usually believed. The writer has frequently seen patients taking, on their own responsibility, larger doses than that above described who were distinctly cyanosed, but in whom nothing more serious than the change in color could be made out. One patient, a negress, with a luetic headache, took 60 grains in three hours with no effect other than that her complexion was a remarkable combination of black and blue.

Occasionally aspirin is equally efficacious in controlling the pain, but, unless the patient has a definitely *weak* heart in distinction from one with a valvular lesion, I prefer phenacetin, because of the constipating effect of the aspirin which phenacetin does not seem to have. In ordinary attacks the above medication will suffice. In addition it is sometimes necessary that the patient refrain from his work and rest semi-reclining, preferably in a rocking chair in a darkened room. Sometimes the severity of his pain requires the use of a hot foot-bath. If there is nausea and impending vomiting, the secreting stomach will not absorb any medication put into it and it is then a question of relief by some other entry to the circulation. In such cases of sick headache an attempt should be made to depend on quiet and a foot-bath, unless driven to the hypodermic use of an opiate, and this very rarely should be permitted.

The writer has not given a hypodermic for a migraine attack for several years. Occasionally one encounters very intense attacks of short duration and usually with vomiting at their acme, in which the use of chloroform according to the method used to take the edge off

labor pains, is advisable. Have the patient take six deep inhalations of strong vapor and then omit until pain again becomes unbearable. But it must be emphasized that in no case may the patient be allowed to administer chloroform to herself. It must always be used by the physician or some responsible member of the family. Attacks such as described are usually of infrequent occurrence and the danger of a chloroform habit while present is not very great.

The really important part of the treatment of migraine, however, is that which is intended to prevent the recurrence of the attacks, and here the treatment is that of a regimen and the continuous giving of a special medicine, and it is in the enforcement of this regimen that the above-mentioned opprobrious epithets of Cabot should again be emphasized: lazy, constipated, gluttonous. In gaining the patient's mental cooperation and interest in this regimen, the combined use of psychology and common sense is far from useless. If for instance the individual is overly stout the insistence on the fact that a faithful following of directions will among the other effects reduce the weight, will especially in the fair sex, enhance the faithfulness of the patient. Then otherwise directing the regimen so that its effects are tangible and are such that the patient can take an interest in them, is an unquestionable aid to his thoroughness in carrying out directions. For instance, in the part of the regimen which comprises physical exercise, the writer suggests the following method of giving directions: If as is very often the case, the patient is of sedentary habits, tell him you want him to exercise, but that there is much difference between exercise when a recreation and exercise which is a labor. That in order to get the added benefit from his exercise which will come, when it becomes a pleasure to him, it is necessary to have his muscles in such condition that their employment will not cause exhaustion and that before he begins his exercise he must faithfully take some exercises. These exercises are calculated to strengthen the muscles he is to use in his recreation exercise; usually some form of walking. These preliminary exercises are three in number. First, the patient rises as high as possible on his tip-toes and lets himself down again a definite number of times. Next the patient resting flat on his back in bed before dressing in the morning, lifts both legs together from hips, knees extended and legs flexed as greatly as possible, a definite number of times. After this the third exercise is taken, consisting of having patient squat completely down and rise upright, keeping trunk as erect as possible all the time and seeing to it that while squatting the weight of body rests on ball of foot so that heels rise from floor as he goes down. These exercises

are to be taken night and morning when disrobed and regularly increased in number. To stimulate patient's interest, I am in the habit of having him take maximum calf measurements before he begins exercises and each week thereafter. A few remarks about the added elasticity in one's gait and the added youth and sprightliness which strength in these muscles impart to one's walk, will be very apt to augment the enthusiasm of the patient. These exercises are usually begun with the leg lifting at six, tip-toe at twenty-five and squatting at twenty-five, with directions to increase the leg lifting one every fourth time taken, the tip to one every time taken and the squatting every second time taken. Getting the leg lift up to perhaps twenty times, the tip-toe to seventy-five or one hundred times and the squatting to from forty to 60 times, according to the strength of the patient. These exercises should, if possible, be done in a cool room, and if possible after the last, and while still breathless, a dressing robe should be slipped on, and patient should go to an open window and inhale deeply of the outdoor air. A little outdoor exercise is prescribed shortly after the exercises have been commenced, but it is not increased until the muscular soreness which may be produced in beginning the exercises has subsided, as the legs become strong, the walking which had perhaps previously been done, but as a drudgery, now becomes a veritable pleasure. The patient is directed to buy a pedometer and give an account of just how much he has walked, since the last consultation. Exercise where the element of pleasure enters into it, is not only more apt to be continued, but it is also true that in equal amounts it is better for the patient than where it is performed as a disagreeable duty. Walking in congenial company, or with some interesting objective, is advisable, whether it be a dinner at some country roadhouse or the pursuit of the elusive and sometimes aggravating little sphere of guttapercha on the links. Where one is sufficiently young or if older, sufficiently hardened up, tennis is excellent, and in many cases horseback leaves little to be desired. Oliver Wendell Holmes combined good literature with very good medicine when he said, the best thing for the inside of a man is the outside of a horse. In general, then, exercise should be of a kind that interests the patient and leads him to love, and as far as possible, to live an outdoor life, but in addition to the recreation he should be enjoined to walk in place of riding in his daily duties, whenever he can practicably do so. The convenience of modern mechanical transportation is probably the cause of much insufficiency in exercise.

The next two of Cabot's headings should be well combined under the directions as to diet,

for the diet suitable to migraine should be one which is at once laxative and free from an undue amount of proteid or saccharin elements which lead to the formation of purin bodies and the production of intestinal fermentation and putrefaction. And very evidently the diet which fulfils these requirements is one which, while being rich in cellulose and thus furnishing the proper and needed stimulus to peristalsis and giving proper consistency to the stools, is at the same time best calculated to satisfy the patient's appetite without overfeeding him. In résumé, satisfy appetite, keep bowels open, partially starve him by giving him cellulose.

The desire that such patients often have for meat can usually be controlled by giving a meat flavor to the cellulose diet. Thus string-beans can be cooked with bacon. A very little of the bacon allowed to be eaten. The pureé soups of the various vegetables, such as celery, spinach, etc., can be made with a little meat stock. And while a discrimination in favor of a diet rich in cellulose is very important, a strictly vegetarian diet is rarely if ever necessary and is usually distinctly inadvisable. A mixed diet with less proteid than normal and very little meat indeed when the patient is leading a sedentary life is what will usually be found best.

While the starches are admissible in moderation and levulose may perhaps be permitted in great moderation, the writer gets best results from a complete prohibition of cane-sugar or glucose in all its forms. This is certainly a deprivation, but the good results obtained justify the enforcement of the restriction. Whole milk is quite often imperfectly digested by these patients, but buttermilk is usually of benefit. And it is usually advisable to drink one or two glasses of cool water on rising in the morning. Coffee and tobacco are questions of the individual patient, but alcohol should be prohibited.

Passing from the regimen to the drug treatment of the migrainous condition let it be said that medication here is of essential value and accomplishes definite results. It is mainly because this particular drug treatment has not received the prominence in literature which its usefulness merits that I am addressing you this evening.

In none of the text-books on medicine, therapeutics, or neurology, have I encountered mention of it, except in that of its originator, Dr. Gowers, on "Diseases of the Nervous System," as well as in his monograph on migraine, a full account of its employment is portrayed.

If a person subject to migraine will take a medicinal dose of glonoin, say 1 drop of Spts. Glonoin on his tongue its effect will depend very much on whether he has had one of his headaches within the last few days or not. If he has just had a headache he will get the glonoin

effect—the throbbing vessels and slight head pain, which will shortly subside and leave no traces behind it. If, however, it is somewhere near the time for his next headache, he will get the glonoin effect and as this subsides it will bring in its wake his regular migraine attack. The glonoin will have as it were touched off his migraine headache. The practical fact behind this is that when glonoin is thus administered three times daily after meals and kept at a dose distinctly perceptible to the patient, through a period of months, the effect on his migraine is very satisfactory both to him and to his medical advisor.

In thus administering glonoin, however, it must be borne in mind that a tolerance is very readily established, and that in order that a glonoin effect perceptible to the patient—namely, the sensation of throbbing or flushing or slight headache—may continue to be produced, it is almost always necessary that the dose be increased from time to time, and usually to many times the amount with which one commences. The writer is daily giving such patients 20 or 30 drops of spts. glonoin after each meal, with no more disturbing effect than they have frequently felt from the minimum at the commencement. The good effect of glonoin is just as manifest in migraine cases with an habitually low blood-pressure as in those in whom the blood-pressure is high, nor does the larger dose have any effect on the general health perceptibly different from the dosage usually employed.

The only trouble encountered is with the druggist from whom the medicine is obtained. He frequently has to be reassured before filling the prescription calling for the dose in question. In certain patients, however, at the commencement of the treatment the above-mentioned tendency of glonoin to touch off the headaches must be kept in mind, for a very small dose will for some weeks be capable of keeping them in what might be called a migraine status. In such patients the dose must be small, often no greater than one-fifth of one min., until tolerance is established.

In a considerable number of cases of migraine it is difficult to get free and satisfactory bowel action by dietary means, and where such is the case it is well to have an examination made for a tight sphincter or spastic sigmoid, the correction of which defects will be of great help to the patient.

While the routine use of a laxative is usually an evil, it seems occasionally to be a necessary evil; and in the cases where free diluents and a freely cellulose diet with added cellulose in the form of agar-agar fails to answer the purpose, the writer gives a saline each morning, according to a formula advised by Dr. Ratchford of Cincinnati consisting of a stock solution of mag-

nesium sulphate, 50 grains; sodii sulphate, 30 grains; sodii salicylate, 10 grains, and tr. nucis vomica, 3 minims, in 4 fluidounces of water, to which is added a-half tumbler of a carbonated water from a syphon bottle.

To summarize, when you think of migraine, think of Dr. Cabot's remark about headaches occurring in lazy, constipated, gluttonous people. If the patient does not deserve three accusations, he often is open to at least one. Remember that a patient may have a daily bowel action and yet be constipated.

In all cases of migraine, treatment should consist of first, a sufficiency of outdoor recreative exercise, first strengthening the muscles, if required, and stimulating the patient's interest and pride in physical accomplishments, and where possible, mixing pleasure with the exercise; second, a diet abundantly rich in cellulose with agar-agar added if necessary, and from which sugar is eliminated, proteid given very sparingly and starch in moderation only; third, where the above diet and abundant diluents fail to keep the bowels free, rectum should be attended to, or, this failing of effect, a saline as above advised should be regularly employed, and finally the patient should receive three times daily, after meals, a dose of spts. of glonoin sufficient for him to feel the physiological effect in slight headache or throbbing of head or flushing of face shortly after taking each dose, and the dose should be maintained at or very slightly beneath this level. Remembering that to maintain this effect, the dose has often to be greatly increased, sometimes to gtt. 30 or more tid. Such a regimen has, in the writer's hands, brought much relief to patients with a condition in which the suffering from headache, severe though it often be, is of minor importance compared to the effect on the cardiovascular system and life expectancy itself.

5165 Washington Avenue.

DISCUSSION

DR. G. WILSE ROBINSON, Kansas City: We are again reminded of the fact that there is another disease which we have not yet conquered. Dr. Kinwear Wilson of London told me that in his early days he despaired of ever being a great neurologist because so many of the neurologists he observed had terrible attacks of migraine. The Doctor has well told us that the treatment of migraine resolves itself into two stages of the disease, during the attack and between the attacks. We know that periodic spasms of or periodic discharges from the central nervous system cause a condition which we call epilepsy; periodic discharges or spasms of the sympathetic nervous system cause a disease which we call migraine. These attacks we know are associated in some manner at least with the intoxication of the body, it may be the result of intestinal intoxication, and we know that the condition is one in which we have every evidence of increased cerebral tension. We have in migraine a discharge or an increased secretion of cerebrospinal

fluid, we have the symptoms of increased cerebral tension, we have every evidence of an increased tension of the sympathetic nervous system in this sort of spasm. Now, it appears to me that one method of relieving these patients if they will submit—and some advocate it—is the withdrawal of cerebrospinal fluid through a lumbar puncture. Another remedy that I think has given relief, and I have seen it given, is the administration of large doses of ergot during the attack, as much as 2 drams of the fluid extract of ergot. It will sometimes give surprising relief. Another remedy is glonoin, which will sometimes give relief during the attack by its action on the sympathetic nervous system. The essayist has well said that during the attack we cannot do much for the patient, but by dietary measures, the small proteid diet and such diets as do increase the activity of the intestinal tract we may improve the condition. One thing I find gives relief in these chronic states of constipation is the administration of liquid alboline. I suppose you have all used it for chronic constipation. Agar-agar has been mentioned, and is very good for those patients who do not take a diet and where there is much waste. Exercise, etc., have been well mentioned. An important thing is to treat your patients the year round as you would an epileptic. You cannot give an epileptic bromid and stop his attacks a little while and then forget him; you have to treat him for years, and the principal treatment of epilepsy is dietetic and hygienic—the principal treatment of migraine is dietetic and hygienic.

DR. S. A. JOHNSON, Springfield: These attacks are, as the essayist said, very much akin to epilepsy. They are hereditary, there is hereditary weakness, and if his treatment had been a little better there would not have been much to say, but I think he vitiates all the theory of hereditary weakness by not referring this trouble to a deficiency in the thyroid glandular system (adrenal system). These patients are unable to oxidize as much food as the system requires, and I might add, you have to cut out their heavy, gross foods, they have to eliminate properly, they must not eat late suppers or indigestible foods of any kind, at any time. There is a suboxidation, and the headache is a conservative process of Nature to catch up. The system is water-logged with the accumulated intermediate products of digestion that have not gone on to terminal products. In these, you will find vascular relaxation; the circulation is sluggish—only, perhaps, at the time of severe headache, the arterial pressure is raised in the effort to burn up and start even again. The treatment in these cases is diet and elimination, not sweat baths, but cooling baths, everything that is a vascular toner, and the coal-tars are your headache reducers because they are sympathetic nerve stimulants. I cannot conceive how nitroglycerin could prevent or relieve a migrainous headache, but it will produce the very condition that brings on the headache, unless it be, that the "hair of the dog is good for the bite." It is a life that these people have to live every day. They have got to have fresh air—I don't care much for the exercise the essayist advised, but the fresh air and careful diet, the vascular toners, the belladonna or atropin or suprarenal gland extract should be employed. The Doctor spoke of ergot. That is on the right order, but I believe better than that would be large doses of strychnin three times a day. Those cases that have auras a few minutes or half an hour, or half a day before the attack are not very much short of mild epilepsy. These attacks generally become very much less severe or quit entirely at the heyday of life. It has been my observation that at 45 or 50 years, both in men and women, they become comparatively free from attacks; no doubt, it is due to the more regular life

they lead and probably, too, the greater care they take of themselves.

DR. H. R. LUCAS, Joplin: In regard to this question of heredity in migraine—I speak simply because it has been in my own family, and we have found it was largely a question of diet and of elimination. We are attending strictly to these two points of diet and elimination, and it is, we find, running out of the family.

DR. W. G. MOORE, St. Louis: The gentleman referred to liquid abolene as regulating the intestinal secretion or the elimination. I believe Mr. Lane of London has given prominence to that some time ago. I would like to ask Dr. Robinson and any others who have had sufficient experience with liquid abolene, how they give it and what their experience has been. Lane, I believe, recommends only a single teaspoonful—if I am correct, I may not be. I have taken his name as a semblance of authority, which I have long since begun to believe is no semblance of authority at all. "Eminent authority" don't mean eminent worth many times. Now, I think we have some authorities right amongst us quite as trustworthy as Mr. Lane, and, not signaling him or pointing him out especially, I believe it is a very true idea that "distance lends enchantment to the view," and has much to do with "eminent authority" in another country.

Dr. Woodson stated here that a grain of calomel and a grain of caffen were of value. I can understand that surely, but if there is any good in liquid abolene or anything excepting getting outside where you can see and feel, I have not been able to find it, and I am here for the good fellowship of this meeting, and incidentally to take hold of something that I can use for the advantage of my patients. I know this gentleman who spoke and I know the essayist, and if they will give me their candid opinion on this they will be "eminent authorities" sufficient for my purpose.

I would also hate to take the dose that the essayist spoke of every morning, sulphate of magnesia, sulphate of sodium, nux vomica to sweeten it a little, etc. The essayist said it was the "denier re sort," but I would like to put a stronger word, a "dammier" resort, I would call it. I would refuse to take that dose once a year, much less every morning.

DR. G. W. ROBINSON, Kansas City: May I be permitted to answer Dr. Moore's question as far as my ability will permit? I have used liquid abolene quite extensively in the treatment of constipation. I never had any success with a teaspoonful. I use it usually an hour or two after meals, preferably two hours, and I use a tab spoonful or two or more as a dose three times a day, as necessary to get the results. Liquid abolene and oils of a similar nature are not changed in the passage through the intestinal tract; they go through just as they are swallowed and lubricate and soften the fecal matter to such an extent that they do give wonderful results in some cases of constipation, and I have been using it for several years and have used many, many gallons of it. I have never seen anything that will give as good and satisfactory results. It is not a purge, has no purgative action at all, but brings about a condition in which we get every day an action of the bowels, and we know that constipation is largely a question of habit. If the patient is taking a proper diet, liquid abolene, in my opinion and from my experience, is the very best thing to overcome the constipation. If a patient is taking a diet with no waste, agar-agar is better than abolene because agar-agar swells in the intestinal tract and gives bulk. Some patients will complain of the taste of abolene; a little oil of wintergreen will disguise the taste. I have never had a patient

refuse to take it. Some complain a little about the taste, but very few, and it is much more pleasant than many other oils.

DR. W. T. COUGHLIN, St. Louis: I have never used liquid abolene, and I have never used coal oil for chronic constipation, but I have a friend who is interested in the manufacture of a proprietary remedy which is liquid paraffin under another name. He was in very great distress about it, and wanted to know how much of that paraffin could be taken. I told him I had heard Mr. Lane say "you could take as much as you wanted of it; you could give as much as you pleased of it," and I believe that is quite true. However, my friend has discovered, much to his chagrin, that when a patient took more than a tablespoonful daily, that patient invariably came back with the complaint that though the laxative effect of the medicine was all that could be desired yet he now was quite unable to expel flatus without passing more than was desired—a little oil escaping inadvertently along with the wind. A word to the wise is sufficient.

DR. D. S. BOOTH, St. Louis: The treatment suggested by Dr. Campbell for the interparoxysmal periods is probably ideal. My difficulty has been to have it made practical for any length of time. During the period when he is not suffering the patient will seldom follow the treatment and that is probably the reason we have not been successful with it.

One of the speakers spoke of worry as a cause. We consider worry to be a symptom rather than a disease or a cause. It, of course, may become a cause secondarily and a vicious circle formed, but primarily it is an indication of nerve weakness, and when you get a patient to believe that worry is what is the matter with him you are getting into the New Thought idea and the resulting attitude of the patient may perhaps endanger his life. There are different ways of looking at the matter, one practical, the other theoretical.

I find there are many causes; one spoken of but not emphasized was eye-strain. I think you will find that a great many of these patients are relieved permanently when they are beyond the age when they have eye-strain because they are forced to wear glasses.

DR. GIVEN CAMPBELL, St. Louis, closing: I have condensed my paper to a considerable extent in order to get it within the limits of the time, and in doing so I failed to emphasize one very important point, and that has, I see, been a little misunderstood, which is that the nitroglycerin treatment is very distinctly an interparoxysmal treatment. It is given between attacks, and does definite harm if used when the patient should stop taking the nitroglycerin. Of course, there are remedies which would do good during the attack; nitroglycerin does good only between the attacks. Its action is to keep off the attacks and finally they have continuous, mild headache for several days, which gradually subsides and becomes very slight, and then they have none at all. So medicine of that kind would be calculated to do harm if given during the attack.

As to paraffin oil, I have used that. According to my experience with patients who have taken it, they object to the taste quite a good deal. The saline solution is not nearly so disagreeable if washed down immediately with a half tumbler of plain water. I might say further that I have used these oils in frequent doses in a number of cases. In treating these cases of migraine, as mentioned in the paper, I think the indican output of the urine should be watched rather carefully. I know that the significance of indican is looked on with disfavor by some men, but

practically, I find it is of considerable value. I do not find, however, that the oil diminishes the indican output in the urine. I have tried it in probably a dozen cases, in which I have failed to find any reduction, using as much as 6 or 8 tablespoonfuls a day in some cases.

What I wanted to emphasize again was the importance of treating these cases, not because they have head pain, but because the head pain shows that they are in a state where, if they are not treated there is a very great chance of their arteries hardening before their time. I want especially to emphasize that point.

As to the success of the treatment, I notice that in therapeutics generally there are many men with many ideas and this is only one, but all I ask is for you gentlemen to try this out and if the results are not satisfactory I will be considerably surprised.

LOCAL ANESTHESIA IN MAJOR SURGERY*

WILLIAM A. SHELTON, M.D.
KANSAS CITY, MO.

The practice of surgery may be classified under four great epochs or divisions. The first was the heroic era, under which operations were seldom undertaken, and when they were, they were little more than human butchery.

In the second era, which we will call the anatomic, operations were in general so dangerous and performed with such fatal results that they were only attempted in cases of great emergency. The studies of Lister and Pasteur formed the base of the third or pathological era of surgery. In the later days of this period, prolonged anesthesia was required for both careless and thorough work; but we know now that individuals profoundly under the influence of ether or of chloroform, temporarily lose resistance to infection, phagocytosis is hindered or prohibited and immunity is immediately or perhaps permanently impaired. Taking due cognizance of these facts, along with many others, surgeons of to-day regard themselves as having passed to the fourth or physiological era of human surgery. This entirely modern epoch includes the principal idea of allowing the patient to retain his natural forces in such a way as to gain control of infection, necessary surgical trauma and remote nerve and brain impairments. In other words, the principles of the fourth or physiological era of surgery bring us face to face with the problem of so operating as to leave the patient in the very best condition, forcing us to drop from our technic such parts of the system of the third or pathologic era as interfered with the ability of the patient to produce phagocytosis and antibodies and establish a certain immunity against surgical disease.

The real history of surgical anesthesia began in the nineteenth century. It was in 1846 that Morton demonstrated ether anesthesia at the Massachusetts General Hospital, and Warren made the remark "Gentlemen, this is no humbug." Since that time ether for anesthesia has gradually established itself as the safest and most satisfactory anesthetic.

It is only in recent years since surgeons have begun to look into the early and remote effects of general anesthesia and have become aware of its harmful consequences, that their attention has been fixed more and more on the study of local anesthesia. Among the pioneers in this modern technic may be mentioned the names of Hertzler, Cushing, Crile, Matas, Harris and Allen, and it is to them that we are indebted for a large amount of our knowledge of local methods of anesthesia.

However skillfully administered, ether usually produces a certain psychic stress in the early stages of its administration. It is an irritant to all mucous membranes. It causes death by failure of the respiratory center. Producing anesthesia while dissolving the lipoids of the brain cells, it depresses the perceptive centers in the posterior convolutions, the intellectual center, and finally the motor cortex; correspondingly it is a fat solvent which dissolves the lipoids in the kidney, liver and other glands and as a consequence there is an increased amount of waste produced to be eliminated, and an increased tax on all the excretories, and as above stated it hinders or prohibits phagocytosis, impairs immunity and increases the coagulation time of the blood. The strain of ether nausea and vomiting is always a dangerous factor. It predisposes to embolism and pneumonia and increases traumatic and psychic dangers.

The untoward effects of chloroform as an anesthetic, the fact of sudden circulatory failure, its depressing effect on the sensory and motor tracts of the brain and spinal cord with the consequent nausea and vomiting, are all too well known to you to justify further argument in its disuse.

Nitrous oxid induces anesthesia by its direct physiologic effects and not by causing asphyxia unless it is taken without being mixed with oxygen or atmospheric air. However, it does not produce complete muscular relaxation; that is to say, it does not always meet every need of the general surgeon as does ether and chloroform.

Having reviewed briefly some of the dangers of general anesthesia, let us consider a few of the indications for local. In the first place, I shall not attempt to show that any local anesthetic known to-day is as efficacious in producing local anesthesia as ether is correspond-

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ingly efficacious in producing general anesthesia. The ideal local anesthetic has not been found. To a great many patients the promise to escape the unpleasantness of general anesthesia furnishes a strong indication for the use of local. A great many people, among them a large majority of medical men submit to the inconvenience of surgical disease because of the dread of the anesthetic. Physicians especially readily submit to local anesthesia when they have seen it successfully employed on their patients. Many persons reading the advertisements of the charlatans seek the treatment of such diseases as hemorrhoids and hernia because they are promised a cure without the use of a general anesthetic. When asked the danger of the intended operation which is not particularly hazardous, we frequently tell our patients the greatest danger lies in the anesthetic. If this same patient could be assured that this danger could be eliminated, that the unpleasantness of nausea and vomiting would be taken away, with the pain of the operation successfully combated, he would more readily submit to the contemplated surgical treatment.

That local anesthesia can be successfully employed to a certain extent in major surgery is a demonstrated fact. If this method of anesthesia possesses the advantages above mentioned, why is not local anesthesia more generally employed? Many good surgeons have tried local anesthesia only to abandon it. This is caused not by a failure to recognize its advantages, but because the technic has not been carefully considered. A surgeon accustomed to operating under general anesthesia and who sometimes prides himself not on how well the operation was performed, but on the exact number of moments he consumed in the performance thereof, being accustomed to rapid operating without regard to painful regions and handling the tissues about as roughly as a pathologist would at a post-mortem table, chafes under the definite restrictions drawn by local anesthesia.

No doubt exists that a more accurate conception of the finer steps of the operation is required when operating under local than when operating under general anesthesia. Local anesthesia certainly favors more careful work and gentler manipulation, which is certainly not a fault if it will reduce materially the speed mania of some of our rapid workers. Improper instruments and the failure to observe certain fundamental rules is also a chief cause of failure in this form of anesthesia. I would not have you think, however, that local anesthesia possesses such advantages as to eliminate other methods. Each case must be decided for itself. The skill of the operator, the exact condition of the patient and the character of the skill avail-

able for general anesthesia must all be weighed when operations of magnitude come under our consideration. If the physiological idea is kept well in mind, if the patient is considered to the end that he retain his natural forces, the question pro and con between local and general anesthesia can be satisfactorily decided in each and every case.

Local anesthesia is unpopular with some men because the operator has not provided himself with the proper equipment, or has not kept it in a good working condition. Dull knives and scissors, rusty needles, forceps that lock badly, not a proper selection of the syringe, all tend to make a painless operation impossible. An incision produced by sharp instruments in local anesthesia is not as painful as undue pressure along the same line.

Head and Rivers have given us excellent conclusions in regard to the classification of the cutaneous senses, and the body senses in general. They find that in skin areas made completely anesthetic there is a deep or subcutaneous sensibility to pressure and movements, and that there are two systems of sensory fibers; one system conveying pain and one conveying sensations of extreme heat and cold, but imperfectly localized. This variety is also found in the viscera. It is designated as protopathic sensibility. The other set of fibers are limited to the skin alone, and their sensations are localized more exactly, and are described as the epicritic system. These cutaneous senses are not distributed uniformly over the skin surface. In addition to the cutaneous sensations, there is a deep muscular sensibility supplied by a special set of nerve fibers ending in the muscle spindles, and in the tendon organs of Golgi. Thus we see that the study of the physiology of cutaneous nerve distribution is an important factor in all local anesthesia work.

Resuming the discussion of equipment; any good glass hypodermic syringe, liberal in size with several needles of various lengths is sufficient. Before all operations to be done under local anesthesia is decided on, an exact and anatomic diagnosis of the disease is essential. Likewise the disease in its pathological relations must be clearly noted. The mental attitude of the patient should be carefully considered. Apprehensive patients, those accustomed to magnifying any pain however trivial, can by the demeanor and the personality of the surgeon, be transformed so as to readily submit and become sensible subjects for local anesthesia.

In the preparation of the patient, I usually give an initial dose of morphin at least an hour before the time of operation. The technic of operations in local anesthesia should go hand in hand with the perfect confidence on the part

of the operator as to his ability to perform the same painlessly, and a like faith on the part of the patient. It is wise to instruct the patient that the first prick of the needle will cause the same sensation as the giving of a hypodermic injection. The field of operation being carefully prepared in a surgical manner, the skin is picked up and firm pressure is made until it is quite balanced. This renders the initial prick less sensitive. As soon as the needle is in the skin as in giving a hypodermic, slight pressure is made on the piston which forces out only a drop or two of the solution. The needle is now pushed forward and a few more drops injected and this procedure carried on until it will no longer reach further. This method should be repeated and continued until the line of incision is completely anesthetized. After the injection is finished, it is wise to prick the skin in order to determine if the anesthesia is satisfactory. In different regions of the body, it is well to consider the nerves that traverse this locality and when they are met with they should be blocked. This is accomplished by grasping the nerve in a hollow forceps and the fluid injected until it distends the nerve sheath. This done, the areas traversed by the nerve may be operated on without fear of producing pain.

A great many drugs have been employed in producing anesthesia; among them are cocain, novocain, quinin and urea hydrochlorid, beta eucain, stovain, etc. Cocain is the most efficient and most dangerous of all local anesthetics. Because of its extreme toxic action, it should not be used in major surgery. Novocain is much less toxic than cocain and is quite as efficient, can be boiled and may be used indiscriminately in solutions of $\frac{1}{4}$ to $\frac{1}{2}$ per cent. I have employed this drug in most of my work.

Gynecologic operations form a large part of surgery at the present time. An appreciable portion of this work on the external and readily accessible parts may be satisfactorily performed under local methods of anesthesia and even some of the more complicated procedures on the deeper parts may be made with skill and gentleness, to be almost painless in suitable subjects. In the presence of contra-indications to general anesthesia and positive indications for surgical intervention, operations on the female genital organs may be rendered safer and more satisfactory under local measures alone or in combination with light superficial inhalation anesthesia for the more painful and deeper parts.

Repair of the cervix and perineum can be painlessly done if we remember that the external parts of the vagina are very sensitive and should be thoroughly infiltrated. The vault and upper parts of the vagina have very little sensation. The cervix and uterus are not very sensi-

tive to incisions, but quite so to stretching, as in dilatation of the cervix. The mucous membrane of the cervical canal and uterine cavity has comparatively little sensation as is also the peritoneal investment of the uterus; but both should not be operated on without infiltration.

Intra-abdominal operations for shortening the round ligaments or fixation of the uterus may be done under local anesthesia, if the uterus is not bound down by adhesions. I have found that intestinal adhesions do not take kindly to local anesthesia, as far as the analgesic effects are concerned.

Cesarean section can be performed under local methods when other forms of anesthesia are contra-indicated.

The following is from a paper by Drs. R. K. Smith and Jacob Schwartz of San Francisco, read recently at the San Francisco Medical Society, and amply describes the procedure. In both cases there was a contracted pelvis with contra-indications to general anesthesia; in both cases mother and child survived:

"The solution used was novocain (0.50 per cent.), which was freshly made and boiled for five minutes before using. Two points, one 9 cm. above the umbilicus and the other a like distance below it in the median line, were infiltrated with a drop of solution, and from these, as points of departure, the solution was injected about a diamond-shaped area subcutaneously and then subfascially."

The operation was carried out as follows: Incision through the abdominal wall 15 cm. long, with its center opposite the umbilicus, peritoneal cavity packed off with gauze, uterus incised with knife down to the placenta for about 1 inch, and the incision rapidly enlarged with scissors to about 15 cm.; the placenta pushed aside, the membranes ruptured, the child grasped by its feet and extracted, and the placenta removed from the uterus while it was *in situ*; the uterus lifted out of the abdominal cavity and surrounded by pads dipped in hot saline solution. In Case 1 the hand was introduced through the incision into the cavity of the uterus and one finger passed through the cervix, this was followed by a Goodell dilator, which was carried through the cervix and stretched open. This was not necessary in Case 2.

In operations on the thorax, local anesthesia is indicated more often than anywhere else. In fact, the very existence of disease affecting organs of the chest, places at least a contra-indication against inhalation anesthesia. The various diseases of the lungs and pleura furnish the most frequent objects for surgical attack, while the circulatory organs also are beginning to receive the attention of surgeons.

Rib resection can be admirably done under novocain. The site of the operation is selected, usually the seventh or eighth rib at the mid-axillary line, the skin surgically cleansed, a line about 3 inches long injected over and parallel with the rib selected for removal. The space under the rib at both ends of the line of injection is infiltrated profusely to anesthetize the intercostal nerve. Next the periosteum over the rib is freely injected. Incision is made through the skin the length of the line infiltrated, the muscle incised and all hemorrhage controlled. The intercostal vessels may be punctured at the infiltration and this hemorrhage should also be checked. The periosteum is then incised and elevated over the rib for its entire circumference, care being taken to remove it from the groove containing the intercostal vessels; the periosteum being loosened from the rib the entire distance of the incision, the rib is cut. When all hemorrhage is checked and the drainage tubes are ready, the periosteum is quickly incised and the tubes passed into the opening and sutured to the skin.

In the treatment of umbilical, femoral and inguinal hernia, local anesthesia should be universally employed. In the umbilical variety I usually employ a transverse elliptical incision, having first infiltrated completely around the summit of the tumor mass. The incision is made in this line exposing the mass to the point of attachment to the ring of the hernial opening. The base of the ring is infiltrated throughout its entire circumference and the sack is then opened at its summit.

If adhesions at the base of the ring exist, they must be loosened and free, and omentum and gut returned. The entire sack is then removed and the fascia sutured according to the regular Mayo operation.

Operations for strangulated umbilical hernia should always be done under local anesthesia as otherwise they are accompanied by high mortality, which can thus be reduced. In operations in inguinal hernia it is wise to take into consideration the distribution of the nerves that supply this area. The nerve trunks are the ilio-inguinal, genito-crural and ilio-hypogastric. Having well in mind the nerve-supply, the ordinary skin incision is made after infiltration over the inguinal canal. The usual Bassini or Halstead's method may be employed, care being taken to successfully block the three nerves above mentioned. The ilio-inguinal nerve should be exposed, picked up gently with hollow forceps and a few drops of novocain injected into its sheath. The nerve is then pushed to one side, the cord is infiltrated at the point where it escapes from the internal ring, the needle being directed toward the ring. The sack is now identified. It usually lies immediately below the nerve anterior to and above the cord.

The sack is opened, its contents replaced into the abdomen and ligated with the thread left long so as to make the transplantation above the ring.

Hernia operations under local anesthesia have more frequently been done than other operations of like magnitude. Patients often declare that the inconvenience of the general anesthetic are greater than the pain, if any, of the operation under local anesthesia.

In one of my cases, a patient who had had one side operated on under general anesthesia and subsequently was operated on the other side under local anesthesia, strongly commends the latter method. This testimony is even more convincing when it is taken into consideration that his second operation under local anesthesia was complicated by strangulation. As above stated, the surgeon's interest in local work with reference to this operation lies primarily in the fact that many persons forego a herniotomy because they dread the general anesthetic. The certain avoidance of vomiting which causes special strain on the sutures is of great advantage as regards an ultimate cure. The chief reason for the preference to local anesthesia is the lessened suffering of the patient, the eliminating of gas, pains, etc., and the general convenience of the nursing staff. Cases in which renal, cardiac and pulmonary diseases exist, should be allowed to retain their hernias unless they consent to local anesthesia.

In closing, I wish to leave with you a few reasons why local anesthesia should be employed whenever possible.

1. It has no deleterious systemic effects (does not produce anesthetic shock).
2. It relieves the morbid fear of the general anesthetic and lessens materially the postoperative psychoses.
3. It sometimes enables the patient to aid the surgeon by position, etc., during the operation.
4. It does away with nausea and vomiting and favors comfort and ease after operation.
5. It materially reduces the mortality rate and eliminates the sudden deaths after inhalation anesthesia.
6. It requires a more accurate conception of the finer steps of the operation, forcing the average surgeon to do more careful work and to a certain extent reduces "speed mania."

If it has been made clear that local anesthesia occupies a dignified place in the realm of major surgery and a foregone conclusion exists that it has come to be the anesthetic of choice in all minor work, then I trust this subject will to a greater or lesser degree awaken the interest of the profession in local work, and the principles of the fourth or physiological epoch of human surgery be correspondingly advanced.

STATE MEDICAL LEGISLATION FROM THE
VIEWPOINT OF THE PHYSICIAN*

W. S. ALLEE, M.D.
OLEAN, MO.

I appear before your Society by request of the Program Committee and not from personal choice. When first asked to make a talk or read a paper on the subject named, my inclination was to respectfully decline, and I had two reasons for taking this view. First, I feared you might misunderstand my motives and charge me with some selfish object. I have no axe to grind, no favors to ask. I have reached that time in life where rest, rather than action, is most pleasing, and if selfishness were to govern my acts I should seek lines of least resistance rather than engage with my professional brethren in a fight for the common good where the only reward is a consciousness of duty done. The second reason that made me feel like declining is that you have members who have grown gray, as it were, in the service of our profession and the people in promoting good and defeating bad legislation which had to do with public health matters. I could name men, members of this Society, some of whom are with us to-night, "the laces of whose shoes I am not worthy to unloose," but it is not to these I speak.

It was suggested that a large majority of the members of your Society had never taken an active interest in favor of legislation of vital interest to our profession and the public, and that a voice "as one crying from the wilderness" might reach some of them with a hope that they would take a more determined stand in favor of progress in this most commendable work. This is a time to become active; one-half the members of the Senate and all the members of the next House of Representatives will be elected this year, and the nominations will be made at the primary election to be held in August, while the candidates to be voted for must file their intentions prior to June the first.

If you are to have the best chance to make a wise choice it is time to get busy and help to bring out suitable candidates for these legislative positions. Doctors are often advised to steer clear of politics, but this is from men who have succeeded in their profession by close application and confining all their energies to strictly professional duties, leaving to the more unselfish members of the medical fraternity to serve the public in medicolegal questions. These men often speak in a sneering manner of those who are faithful to all public duties. He who neglects the most important functions of good citizenship and boasts of such neglect as a virtue is not a sane and safe adviser, nor is he a model to follow, though he be an intellectual giant and morally above reproach.

There are men who are willing to serve the public faithfully in legislative positions though it means a personal sacrifice, but the best men are not hunting such jobs, and to secure their services it is necessary to convince them that there is a popular demand that they shall make the sacrifice of time and money for the common good.

The best men in any legislative body seek information as to those subjects of which they have no special knowledge from sources which are reliable. There is always a majority of any legislative body ready and willing to support measures urgently recommended by the medical profession when convincing evidence is given as to the merits of the proposed legislation, and that it is of interest to the masses and not for any special class, otherwise we might as well admit that our people are incapable of self-government. Any measure endorsed by the regular medical profession that has for its object the protection of the public from incompetent practitioners, or that seeks to prevent disease, will receive favorable consideration from all good men of wise discretion because they know that it is to the regular medical profession they must look for safe advice.

There is an element that has been prejudiced against us because of the persistent misrepresentations of our position by the irregulars, isms, pathies, mental and magnetic healers, who from selfish motives have maligned and misrepresented those who practice scientific medicine until it is not strange that many men are deceived and are inclined to look with suspicion on our requests.

The medical trust cry has been worked with more success than many of you can realize by the element to which I have just referred. The charge that we have formed a medical trust and only seek legislation to protect our selfish interests is to you so palpably false that it seems foolish and unworthy of your consideration; therefore you have done little or nothing to combat it.

Members of all the sects in medicine have one common characteristic; they fight all legislation intended to protect the public from their incompetency, they never miss an opportunity to push their claims for recognition and sympathy, they are ever ready to espouse the cause and help to their utmost any man whom they can use or who is a prospective friend, while they persistently misrepresent and malign the regular medical profession.

Sectarian medicine is the bane of our profession; the divisions, jealousies and bickerings of licensed practitioners of medicine have disgusted many laymen and caused them to wonder whether they could trust any doctor as an unselfish adviser on medical legislation. If all licensed practitioners would drop special designations, call themselves doctors without quali-

* Read before the St. Louis Medical Society, April 25, 1914.

fying terms, practice medicine and use such remedies and in such doses as they may deem best, forgetting that they have an interest in perpetuating the life of any sect, but help to the utmost of their ability to maintain the honor and credit for unselfishness of our profession, many of our difficulties would vanish as the dew before the morning sun.

It is rather difficult for the average layman to discriminate as between doctors, and if the irregular happens to be his personal friend and supporter, he may in a sense be pardoned for following the advice of the sect to which this friend belongs, rather than those who are seemingly in opposition and seeking to embarrass the element that commands his sympathy. The public should have more reliable information as to the false teaching and dangerous practice of the many pathies in medicine. The reading public ought to know that all the advances in medicine, whether it be in the treatment or prevention of disease by determining the cause and means of eliminating it, have come from the regular medical profession and the only reason this view is not universally accepted is because it has never been placed properly before the discriminating public.

A more intimate connection with the public press would strengthen our position and remove much of the opposition from those who are acting from misinformation. It has occurred to me that we ought to have a committee to represent the State Association, one from the St. Louis Medical Society and one from each of the large county societies in the state, whose duties it should be to give out statements as to the position of the organized profession on all legislative questions that we are interested in as a profession and to present the matter in such clear manner that any unbiased mind might see the reason for the position assumed.

The greatest service might be rendered humanity by taking into our confidence reputable agencies of publicity and assisting them to spread accurate and reliable information on matters pertaining to public health. People can only learn the sane and safe positions to assume in these matters from such a source as outlined. It is the deception dealt out by incompetents, imposters and selfish interests that has worked such great injustice to the public and it is our duty to meet this in some effective manner. If the public could have reliable information that was convincing as to our objects and good intentions the dangers from ill-advised legislation would very soon vanish.

The question as to whether physicians are obligated to do more than any other class of good citizens to promote public health legislation is not debatable, opportunity implies responsibility and our being in possession of knowledge which enables us to see the necessity

for such legislation implies that we are in honor bound to do what we can to protect the people from incompetent medical practitioners and conditions that might endanger the public health. The St. Louis Medical Society has a membership of more than 800 and the power for good which this body of men especially trained in medicine may have is hardly possible to estimate. I suspect that not to exceed 5 per cent. of your membership have taken any active interest in legislation pertaining to the welfare of our profession or the public.

It has seemed to me that the medical men of this city have been more active in municipal legislation than in efforts to influence favorably state legislation. I commend you for the good work done in getting a good milk inspection law, you have secured a model law for the purposes intended. It was a pleasure to see that all amendments were defeated that were intended to render the law ineffective by taking from the Board of Health the power to revoke licenses of dairies that were selling dangerous milk. The selfish interests always attempt to cripple laws, intended to protect the public, by amendments which leave no one with authority to enforce the law. Do not forget that St. Louis is part of Missouri and that unwise legislation affecting our profession or the public must hurt your people to the same extent which it does every other section of the state.

St. Louis is becoming a great medical center, we are all proud of the character of your best schools and instructors as well as the wealth of clinical material at your disposal which will eventually make this a medical mecca. In your most commendable effort to lead as a center of learning do not forget that you have another obligation to humanity, that of good citizenship, which you cannot shirk without standing discredited before the world. If it be true as suggested, that not to exceed forty to fifty medical practitioners of your city have taken any active stand for good legislation or have helped to defeat bad measures that would hurt our profession and the public, you are falling far short of your full duty, and I am sorry to say that you are not behind the country districts in this respect, then is it any wonder that we have sometimes failed when our cause was just and we should have succeeded.

Think of fifty doctors in your city trying to get action favorable to any cause that is commendable, while 750 are either indifferent or in open opposition and you may readily see why we fail. The quack and impostor with those whom they may deceive into supporting them will surely take advantage of the indifference of such a large percentage of our profession to prove that the weight of professional influence is against the few who are actively seeking favorable legislation or endeavoring to prevent unwise acts.

I have sometimes been embarrassed on approaching members of the legislature to ask support of certain measures, when giving as a reason for asking their help that the doctors of the state were united in asking for the enactment of the law, to have them tell me that the doctors in their locality were not in favor of the proposed action or at least they were indifferent about it, and to clinch the statement, show a letter from the home doctor, his family physician, stating that he had been asked to write favoring the measure, but he, the family adviser and trusted counsellor, had no interest in the matter and that doctors generally were not caring about it, that it is the efforts of a few medical politicians to attract attention to the subject and to advertise themselves.

Such a doctor is a dead weight, he is a load to carry, his influence is against his profession and the inaction of large numbers of other physicians lends credit to his position and correspondingly weakens the influence of all. Think what it means to have nineteen to one on the wrong side of a question, even a just cause can hardly win under such adverse conditions.

There is another element of weakness in our profession, the disposition to differ about immaterials. We may agree as to the principle of what should be done and then wrangle over minor propositions until our strength is dissipated and all is lost.

Physicians should act in harmony if they are to have the power and influence necessary to get the best results in securing needed legislation. If the majority shall have decided favorably or otherwise on any proposed measure it is the duty of all to fall in line and throw their influence to the right side. It is right and the duty of each member of your society to contend for what he deems wise and best for all, so long as no official action shall have been taken, but after due consideration and final action by the majority it becomes the duty of individual members to submit gracefully and give loyal support to plans of the majority. In my efforts either for or against measures that have been passed on by the organized profession, I have been governed by the will of the majority.

No one member should assume to know more than the major portion of all his professional brethren, and with me the decision of the majority is accepted as equivalent to instructions and leaves no room for doubt as to my duty. The one thing necessary to enable our profession to do its full duty to the public in getting wise legislation affecting sanitary and health conditions is for all doctors to keep themselves informed as to the merits of pending legislation and use their best endeavors in favor of all good measures proposed in the interest of the profession and the public. I firmly believe that the influence of more than half of the doctors in Missouri, even the mem-

bers of our State Association, are against the organized profession, and it comes from indifference rather than open opposition. I want to impress it on the members of this society that indifference to the success of any proposed legislation affecting our profession by a large percentage of practicing physicians can and will be made to appear as open opposition by the persons who seek to practice medicine without having made any preparation for such service.

This is an element that gets more sympathy than you may imagine from misguided citizens who are influenced by ignorant pretenders and patent medicine interests to oppose the most effective laws for the protection of the public from incompetent practitioners of medicine. The quack and incompetent always appear in the roll of human benefactor, as innocent of intended wrong as the new-born babe, as an alleged martyr to an arrogant medical trust; and he asks for and gets sympathy as the under dog.

In our efforts to protect the public from the many dangerous fads and false systems of medicine, so called, we have incurred the enmity and prejudice of many who have been impressed with the view that real merit was to be found in the so-called systems of medicine or plans of treating the sick which have so persistently demanded recognition by law.

You may want to know what I have to suggest in the way of legislation pertaining to medicine. There is little to be done in asking for new laws, as I see it, we are now in advance of public sentiment and it is more important to hold what we have than endeavor to get more or better laws. Our law relating to licensing of physicians and their conduct toward each other and the public compares favorably with any of the surrounding states, in fact few states in the union have any better laws in this respect than has Missouri, but if we are not constantly on guard there will be changes made for licensing or exempting from the provisions of the law all manner of persons who may pretend to have a better plan for treating the sick that has yet been devised by regular scientific medicine.

Those of you who have not been actively connected with efforts to prevent such ill-advised action in the past have little idea of the persistency shown by all manner of persons who want to prey on the gullible public by giving treatment of some kind for a real or fancied disease, the emoluments arising from the service rather than a hope for real relief being the motive for the act. These people pretend to have a power not enjoyed by any other known source, their power is personal and cannot be transmitted to others, therefore, they must be exempted from law or all is lost to suffering humanity.

The danger from efforts to amend our laws in this particular are very real as evidenced

by the number of bills introduced and pushed for passage in the 47th General Assembly of Missouri. I need only mention two bills, one intended to exempt all mental or magnetic healers from the provisions of the law licensing physicians to practice medicine, surgery and midwifery, the other to create a Board of Eclectic Examiners to license graduates of the so-called Eclectic schools, the latter offered in the interest of the Kansas City Eclectic Medical College.

If either of these bills had been passed it would have rendered our medical practice act worthless. The same efforts will be made at the next session of our state legislature and it will require all your vigilance and best efforts to prevent some modification of the present law that will be bad for the profession and worse for the public. In the year just passed, 1913, there were legislative sessions held in forty-three states of the union and more than one thousand bills having to do with public health matters or regulating in some way the practice of medicine were offered in these several state legislatures. Many of these bills were no doubt good measures and offered with a real desire to benefit the public, but the greater number were probably proposed and pushed by persons who had a selfish interest in asking the change of laws that had embarrassed them in a business way.

RETROBULBAR NEURITIS WITH ETHMOIDAL INVOLVEMENT *

REPORT OF A CASE

W. F. HARDY, M.D.
ST. LOUIS

A chapter of great interest in ophthalmology is that dealing with the pathological eye conditions resulting from accessory sinus disease. It cannot be said that such occurrences are rare, as the literature of the last few years has much on this subject; in fact to such an extent that a consideration of but one phase of the matter is of intense interest and richly productive of information. This paper will deal briefly with retrobulbar neuritis resulting from ethmoid suppuration with a report of a case. Mention will also be made of the incidence of ocular trouble due to other accessory sinus diseases. A consideration of the anatomical relations of the orbit and the nose and its sinuses will give cause for surprise, not that ocular trouble arises so frequently from sinus disease, but that it does not occur more often. The subject naturally brings up the much mooted question as to where the field of activity of the ophthalmologist ends and that of the rhinologist begins.

Undoubtedly there will be a readjustment in the future of the somewhat arbitrary lines of demarcation. Manifestly those ocular conditions, the result of contiguous disease, belong to the field of the ophthalmologist. The question will right itself and the best interests of patients be conserved if in the meantime oculists acquire a thorough knowledge of the anatomy and pathology of the neighboring structures and the remedial measures necessary for the alleviation of such eye trouble as is dependent on their disease. He need not apply such curative procedures himself, but without doubt should know when and where they are indicated.

As to the frequency of sinus complications in general the figures are quite interesting. Birch-Hirschfeld found in 684 cases of orbital inflammations, the sinuses involved in 60 per cent., divided as follows: due to the frontal sinus 29.8 per cent., the antrum 21.8 per cent., the ethmoid 20.5 per cent. and the sphenoid 6.1 per cent. It would seem that 6.1 per cent. due to the sphenoid is a rather low estimate. Numerous cases of optic neuritis, followed later by atrophy, have gone on to complete blindness where all manner of remedial measures, even subtemporal decompression, have been applied, save an attack on the real causative factor, viz., a sphenoid sinus suppuration. Cohen and Remking reported 25 cases of nasal sinus disease with orbital complications. These occurred in 75,000 patients or 1 to 3,000. In one of their cases there was a retrobulbar neuritis from an affection of the ethmosphenoid sinuses which showed great improvement following the application of cocain-adrenalin to the posterior upper portion of the nose and complete recovery took place after operation on the posterior ethmoid cells and sphenoid sinus. The outer wall of the ethmoid body, the lamina papyracea which is also the inner wall of the orbit in great part, is extremely thin as its name implies, varying in thickness in different individuals. It is normally penetrated by vessels and dehiscences of bone may also occur, at which points the periosteum is often extremely thin. The anterior ethmoid cells correspond to the anterior half and the posterior cells to the posterior half of the inner wall of the orbit. The sphenoid sinus may be brought into close relation with the optic nerve by reason of its extension into the lesser wing of the sphenoid. Onodi has shown the relation which the posterior ethmoid cells and the sphenoid bone bear to the optic nerve and the chiasm. He was thereby enabled to explain certain forms of retrobulbar neuritis and atrophy of the optic nerve. He also has shown that unilateral, bilateral and contra-lateral disturbances of vision and blindness are often caused by affections of the posterior ethmoid cells and the sphenoid sinus. Hollitzer states that inflammations of the optic nerve due to an infection of the ethmoid cells or sphenoid

* Read at the Ophthalmic Section, St. Louis Medical Society, Feb. 4, 1914.

antrum, are as a rule diagnosed by exclusion. This view is in accordance with the facts as exemplified in my case. Retrobulbar neuritis is found in different intoxications, in affections of the nervous system, in syphilis, diabetes, lead, alcohol, etc. Sinusitis of any of the sinuses may produce retrobulbar neuritis. As a routine measure pressure at the upper inner wall of the orbit should be made and it will elicit very acute pain should a frontal sinusitis be present. If the test is not made at the correct site, misleading information may be obtained, as firm pressure of the skin over the orbital rim or pressure on the supra-orbital nerve will give rise to painful sensations. Pain at the root of the nose accompanies intranasal disease, frontal sinusitis, and also occurs in exophoria and ametropia. Pain is not a prominent feature in the cases such as the one described in this paper. This patient had for a while a feeling of discomfort deep in the orbit, but no actual pain. In bilateral trouble we naturally suspect the sphenoid and in unilateral trouble the ethmoids, particularly the posterior ethmoid. According to Holden, the etiologic factor in a nontoxic retrobulbar neuritis, narrows down generally to a multiple sclerosis or sinus disease. Peripheral scotomata and optic neuritis demand an examination of the nose in every case. The importance of thorough examination of the nose has been insisted upon by some writers, where no nasal symptoms seem present and even upon operation where the nose apparently shows nothing. It matters not what section of the optic nerve is involved by inflammations of the vicinity; operation is indicated and the sooner it is done the better. No anatomical examination of inflammations of the optic nerve in the optic canal have been made. Whether the condition is a result of a perineural edema or an actual inflammatory condition of the tissues around the nerve is undecided. The case report is as follows:

F. K., aged 27, blonde, single and painter by trade. Consulted me in November, 1912, stating that ten days previously while walking along the street, he noticed he could not see well with his left eye. Vision diminished until at the time of his first visit it was reduced to fingers at 30 inches. O.D.V. 15/10. His history was good, being a man of excellent habits. He denied all venereal infection. He was careful about his hands and nails, thoroughly cleansing both before handling food. His work brought him little in contact with methyl alcohol. Five days after the onset of eye trouble and five days before his first visit, he took a cold, as he expressed it. No particular attention was paid to it. He had had many previous colds. The discharge was mucopurulent and from both nostrils. Examination showed sluggish iris movements, media clear and fundus normal except that there was a slight tortuosity of the retinal veins and a slight haziness of the edges of the disk, becoming significant by comparison with the right fundus. Throughout the entire course of the disease the fundus picture changed but little except that the disk became paler than its fellow and two small hemorrhages appeared, one near the

upper border of the disk and the other several disk diameters up and out from the papilla. He returned to his family physician, who daily essayed to shrink the mucous membrane of the nose with little or no effect on either the ocular or nasal condition. After a week's persuasion he finally consented to an examination by a rhinologist, and after more persuasion to an operation. The middle turbinate was removed, the ethmoid cells broken down and the sphenoid sinus opened up freely. The nasal work was done by Dr. Herman B. Miller. Improvement commenced very soon after the operation and proceeded rapidly.

The nasal discharge quickly subsided; vision improved until, when last seen, it was 15/10. The disk was still paler than its fellow. The etiologic factors considered were plumbism, methyl alcohol poisoning, auto-intoxication, lues and ethmoid trouble. All but the latter were excluded before the rhinologist found positive evidence of ethmoid suppuration, so no hesitancy was entertained in urging immediate operation. It was felt that too much time had already elapsed between onset and operation. Procrastination undoubtedly, in these cases, works for much harm and irreparable damage. It might be held and urged that the ocular trouble antedated the nasal and was in no way associated with it. On the other hand, I am convinced that the ethmoid infection existed latent, the result of prior infection and that it re-infected the nasal mucous membrane, producing an acute muco-purulent rhinitis. The nasal condition as seen by Dr. Miller and the prompt improvement, both ocular and nasal, following the operation, bears out this contention and lessens the probability of its being a mere coincidence. There was no local treatment subsequent to the operation. Dionin was used before the operation. Internally medium doses of sodium iodide and strychnin were given and continued until the patient was discharged.

DISCUSSION

Dr. Post: All of us are especially interested in this comparatively new knowledge that has come to us in regard to this class of cases that formerly were obscure in their origin. I think the oculist should be prepared to examine these cases in such a way as to be pretty well satisfied as to what the condition is; but whether it is going to be feasible for the oculist to become expert enough to open up the sphenoid and the ethmoid cells to the advantage of the patient, when there are competent men who are giving special attention to these things, and who can treat the condition for him, hardly seems to me likely. I think every case of this sort which is brought to our attention is of great value and will help us materially in our work. The doctor speaks of exclusion of the other possibilities before taking up the question of the ethmoidal and sphenoidal condition as being the cause of these troubles. My own experience has been that in going over such cases I have found conditions that have led me to send the patient to the laryngologist without making a diagnosis by exclusion. The doctor's method is wise. We should be careful and not jump at conclusions.

Dr. Charles: I would emphasize one symptom that has led me to think first that the patient has a sinus affection, or, second, is a neurotic, viz., there being no signs of irritation either in the lids or the ciliary body, the patient complains of a deep seated pain in the eye whether it is in use or not. It is not simply a pain in the orbit back of the eye, but a pain in the globe itself.

Dr. Hardy, in closing: The diagnosis by exclusion was not made as a matter of choice but was done while the patient was deliberating about consulting a rhinologist. A tentative diagnosis of sinus involvement was really made at the first visit.

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EDITORIALS

PHYSICIANS IN THE LEGISLATURE

Among the candidates for the state legislature are several physicians, all but two of them members of our Association and each one worthy of the support and confidence of the medical profession and of the people. Most of them have served their communities in official positions from time to time and to some of them the legislative halls will hold no novelty or new experience because they have represented their counties in former years in the general assembly. We believe the people should count themselves fortunate when they have opportunity to send to the legislature an intelligent, broad-minded, reputable and well-informed physician, because such a physician possesses an adequate conception of the needs of the community for the conservation of the health and lives of the inhabitants and a practical knowledge of the methods and economic means for promoting hygienic and sanitary conditions. Such men also may be depended on to exercise sound judgment and intelligent discretion concerning the passage of bills on topics other than those that affect the public health and they will therefore exert a powerful influence in the enactment of just and equitable laws.

It gives us pleasure to mention briefly and concisely some of the qualifications possessed by the physicians who have been nominated for the general assembly. To do this is, we believe, sufficient to attract to them the votes of the members of the Association in the counties represented.

The democratic nominee for state senator from the sixth district, comprising the counties of Chariton, Sullivan and Linn, is Dr. John S. Wallace of Brunswick. He is a native Missourian, 65 years old, and has been identified with public affairs all his life. He graduated from the Bellevue Hospital Medical College, New York, in 1873, and practiced in his home county for a number of years thereafter. He then moved to St. Louis, where he was associated with the St. John's Hospital and for four years had charge of the dermatological clinic. Later he returned to Chariton County and located at Brunswick. He was editor of the

county paper, *The Brunswicker*, for a number of years and has held several public offices. He has always been identified with the organized medical profession, serving his county society as president, is at present president of the board of health of Brunswick, and in 1912 was elected first vice-president of the Missouri State Medical Association. He is a Fellow of the American Medical Association.

Dr. Lee Welch of Mountain View is a candidate for reelection on the democratic ticket as state senator from the twenty-second district, representing the counties of Wright, Texas, Howell, Oregon and Shannon. Dr. Welch has served the district as senator for the past two sessions and will undoubtedly be returned at the November election, for the people have found him an earnest and consistent advocate of every measure that would promote the welfare of the commonwealth. He is a graduate of the St. Louis College of Physicians and Surgeons, 1897.

Dr. Thomas B. Cook of Rayville is candidate on the democratic ticket for representative from Ray County. Dr. Cook filled this important office for two terms, representing Ray County in the 44th and 45th sessions of the general assembly and gained the respect and admiration of all the members. He graduated from the Kentucky School of Medicine in 1883, has been a consistent member of the organized profession for many years and an earnest advocate of the reforms and forward movements in the promotion of the public health.

Dr. Guy B. Mitchell of Branson, the republican candidate for representative from Taney County, is an energetic and capable practitioner in the prime of life, a vigorous and active man in the affairs of his community and a staunch supporter of every movement looking to the improvement of the health of the people. He graduated from the University Medical College of Kansas City in 1901 and served in the hospitals of that city for a time, after which he moved to Taney County. For a number of years he served the Taney County Medical Society as secretary and has always taken an active part in the work of the Association.

Dr. John A. Waterman of Breckenridge, Caldwell County, is the republican candidate for representative. He has had considerable experience in public life, having served as penitentiary physician under Governor Hadley and later was superintendent of the Farmington State Hospital. He has been a member of the Caldwell County Medical Society for many years, and is at present secretary of that society and a Fellow of the American Medical Association. He graduated from the Beaumont Hospital Medical College of St. Louis in 1887, and is 52 years old.

Dr. J. R. Womack of Houston, Texas County, has been nominated by the Democratic party to represent the largest county in the state. The job will have no terrors for the doctor, however, as he will acquit himself with distinction and credit. He is a member of the Texas County Medical Society, a graduate of the Northwestern Medical College of St. Joseph, 1883.

Dr. C. M. C. Willcox of Kirksville is the republican candidate for representative from Adair County. He is a graduate of the College of Physicians and Surgeons of Keokuk, Iowa, 1891, and has been practicing in Missouri for a long time. He is 44 years old.

MEDICAL LEGISLATION

On another page we publish a paper by Dr. W. S. Allee, state senator from the 27th District, entitled "State Medical Legislation from the Viewpoint of the Physician," in which he expresses in a convincing manner his ideas of the duties of the individual physician and the medical profession as a body, toward public questions, especially those questions that touch the public health.

Dr. Allee has passed through the fire of many legislative battles and his words will command the most serious attention from the members because he has always exhibited a remarkable talent for statesmanship and shown conspicuous ability in the direction and management of public affairs. He possesses the confidence and esteem of the members of the legislature and thoroughly understands the dangers that lurk on the skirts of the profession in all public health work. Inactivity or indifference at a crucial period on the part of a large number of physicians will, he points out, negate the efforts of the few who endeavor to promote the passage of laws that would advantage the people. Too often objectionable bills are proposed in the guise of public benefits and only a united effort by the organized profession will successfully combat the selfish influences behind such measures.

We commend Dr. Allee's paper to the careful and thoughtful consideration of every member of the Association.

WASHINGTON UNIVERSITY MEDICAL SCHOOL BEGINS SESSIONS IN NEW BUILDINGS

The academic year of the Washington University Medical School began Thursday, September 24, in the new buildings on Kingshighway and Euclid Avenue. Preparations for moving from the Locust Street building had been completed early in the summer and the transfer to the new quarters was affected dur-

ing the first part of September. Before the opening of the session all necessary furniture and apparatus had been installed, and a large part of the new equipment put into commission for use by the incoming classes.

The laboratory work of the school is mainly conducted in three buildings. Of the two buildings opposite the Barnes Hospital on Euclid Avenue, the North Building houses the Departments of Anatomy, Experimental Surgery and Preventive Medicine. In this building also are the Administrative Offices, the Auditorium and the Medical Library. The latter, which is now open for study, contains 17,000 bound volumes and receives 335 periodicals. In the South Building are the Departments of Physiology, Pharmacology and Biological-Chemistry. In this building is found the Mechanician's Shop and supply rooms. The third building, on the west side of Euclid Avenue next the Hospital, contains the Departments of Pathology and Bacteriology and the Laboratories of Medicine and Surgery.

In the Barnes Hospital there will be medical, surgical, obstetrical and special services. The private pavilion overlooks Forest Park. The hospital and clinics will be transferred late in the fall of the present year to the new buildings of the Robert A. Barnes Hospital. The new St. Louis Children's Hospital will be ready for occupancy at the same time. Accommodation for negro patients is provided in buildings on the grounds adjacent to the hospitals.

Of the students applying for entrance, the correspondence shows a larger number of better trained men than in previous years. The enrollment is a decided gain over last year, Missouri sending the greater number of students, then Illinois and Wisconsin. Other registrations were from Kansas, Texas, Arkansas, Iowa, Minnesota, Virginia, North Carolina, Utah, Nebraska, California and Michigan.

Registration in the Training School for Nurses shows a Senior Class of nine, Intermediate Class of eight, Junior Class of thirty-two students, affiliated three, post-graduate one. This increase in the number of students makes it possible to enter the Barnes Hospital with much improved nursing facilities.

The following instructors have been appointed and enter on their official duties in the Medical School this fall: Dr. J. Lucien Morris, Harvard, Associate in Biological-Chemistry; E. A. Baumgartner, A.M., University of Minnesota, Instructor in Anatomy; R. S. Hubbard, A.M., Harvard, Assistant in Biological-Chemistry; R. E. L. Gunning, Jr., A.B., Kansas, Assistant in Physiology and Pharmacology; Howard H. Bell, University of Pennsylvania, Assistant in Pathology; M. R. Johnston, M.D., Washington University, Assistant in Pediatrics; W. E. Shahan, M.D., Washington University, Assistant in Ophthalmology; H. W. Lyman, M.D.

and L. K. Guggenheim, M.D., Assistants in Otology; H. H. Shackelford, A.M., Student Assistant in Biological-Chemistry; F. H. Staley, A.B., University of Wisconsin, Student Assistant in Anatomy.

FALL OPENING OF ST. LOUIS UNIVERSITY SCHOOL OF MEDICINE

The St. Louis University School of Medicine opened with 230 students as follows: Collegiate—Medical 49, Freshman 51, Sophomore 43, Junior 41, Senior 46.

The following new appointments were announced: Homer Wheelon, A.B., from Northwestern University, Instructor in Physiology; J. L. Shipley, A.B., from Oxford University, England, Assistant in Physiology; A. M. Alden, A.M., from University of Iowa, Instructor in Bacteriology; Frederick Hagler, M.D., from Washington University, Assistant in Physiology.

The externe service, which was so successful last year, has been continued. This plan provides that each member of the graduating class is put on service five mornings a week for the first semester at one of the hospitals connected with the medical school under the direction of instructors of the medical department.

The junior class has been assigned to work at the City Hospital, St. John's Hospital and the various dispensaries connected with the institution.

PROPOSE NEW MEMBERS NOW

This is the season of the year in which to solicit new members in the county societies. As in the past, the executive committee has authorized the remission of dues for the balance of 1914 to new members who are elected after October 1, and the assessment collected at the time of their election will be applied to their 1915 dues. Members who anticipate proposing names of physicians for membership in the county society should take advantage of this concession now and send in their applications to the county society at once.

While on this subject, we will remind a few of the old members that they have neglected to pay their 1914 dues and we urge that they fulfil this obligation at once. All members who fail to pay their dues by the end of this year will be automatically dropped by the county society and the State Association and reported to the A. M. A. as non-members, hence their affiliation with the national body will also terminate. It is a matter of very great importance to every physician that he maintain continuous affiliation with the organized medical profession.

OBITUARY

JOHN MILTON SINGLETON, M.D.

Dr. J. M. Singleton of Kansas City died July 21, aged 57, from heart disease. At the time of his death Dr. Singleton was on his farm near Leeds and passed away before he could be removed to Kansas City. He was born in Montgomery County and received his education at Central College, Fayette. He graduated in medicine from the Kansas City Medical College, 1884. He was a member of the Jackson County Medical Society and the Missouri State Medical Association.

EDWIN TYLER DOTY, M.D.

Dr. E. T. Doty of Anderson died on September 13 from gastritis, age 70 years. He was a graduate of the University of Michigan, 1870, and practiced in Joplin for over twenty-five years. About ten years ago he removed to Anderson and had practically retired from active work. He was active in Association affairs and one of the most respected and beloved physicians in southwest Missouri. He attended the annual meeting at Joplin last May, at which time he was in apparently good health.

ERNST SAXL, M.D.

Dr. Ernst Saxl of St. Louis, a graduate of Karl-Ferdinand-Universität, Prague, 1893, died at his home Sept. 11, 1914, from pneumonia. Dr. Saxl specialized in ophthalmology, ranking among the leading men in this specialty in St. Louis. He had been a resident of St. Louis for many years and was identified with numerous affairs outside of the practice of medicine, especially in musical circles. He was a member of the St. Louis Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association.

ADOLPHUS G. WOOD, M.D.

Dr. A. G. Wood, one of the oldest practitioners in the state and for many years very active and prominent in medical circles in Shelby County, died at his home in Lentner, September 6, after a brief illness; age 83.

Dr. Wood was born in Santiago, Cuba, 1831, during a temporary stay of his parents in that country. In 1885 the family moved to Shelby County, where Dr. Wood continued to reside and practice his profession. He graduated from the College of Physicians and Surgeons, Keokuk, Iowa, 1859, and had practiced in Lentner for about forty years, continuing his ministrations almost up to the time of his death.

He was president of the Lentner bank and very influential in all movements in his county looking to the improvement of the health of the people. His wife and nine children survive him, among whom is Dr. A. M. Wood of Lentner, secretary of the Shelby County Medical Society.

A. E. LYLE, M.D.

On August 10, 1914, there occurred at his home in Butler the death of Dr. A. E. Lyle.

Dr. Lyle had practiced in Bates County since receiving his degree over forty years ago, was an honored member of the Bates County Medical Society and of the Missouri State Medical Association, a man positive in his views, but of a generous nature, honest, reliable, loyal to his patients, his brother practitioners and his profession.

The Bates County Medical Society has lost a loyal and active member, his patients a sympathetic friend. His family, who have suffered such a severe loss in his death, have our sincere sympathy.

C. A. LUSK,
E. N. CHASTAIN,
W. H. ALLEN,
Committee.

WASHINGTON EMIL FISCHEL, M.D.

Dr. W. E. Fischel, for forty-three years a practitioner in St. Louis, died at his home in that city Sept. 1, 1914, from cancer of the pancreas, age 64. He graduated from Washington University Medical Department in 1871 and devoted himself to internal medicine, in which he became distinguished as a leader among the representative men in the profession. He was professor of clinical medicine in Washington University, a member of the Association of American Physicians, the St. Louis Medical Society, the Missouri State Medical Association and a Fellow of the American Medical Association.

He was interested in the development of hospital conditions in St. Louis and especially prominent in the organization of the Barnard Free Skin and Cancer Hospital when the erection of that institution was made possible through the munificence of its founder, Mr. George D. Barnard. The medical staff passed the following resolutions at its meeting on October 2:

"In the death of Dr. Washington Emil Fischel the medical staff of the Barnard Free Skin and Cancer Hospital has suffered a great loss. One of the originators of this institution and from 1905 till his death the chairman of the medical staff, his interest in the success and growth of the hospital led him to contribute

unstintedly of his time and energy to its development. To his wise counsel, his great influence in the community and his untiring personal efforts in its behalf are due in large measure whatever results have been accomplished. The medical staff desires to testify to the value of the service he rendered and to gratefully acknowledge its debt to him.

"His strength of character and his professional ability commanded our respect; his gentle kindness and the magnetic charm of his personality won our love and friendship. With sadness we mourn his death but with joy and pride we cherish the memory he has left us of a life unselfishly devoted to the service of his fellowmen.

"To the family he loved so well we offer our sincerest sympathy."

NEWS NOTES

DR. T. W. COTTON of Van Buren, Councilor for the 24th District, has been elected Grand Master of the Masonic Lodge of Missouri.

DR. OLA R. ROOKS has been appointed county physician of Grundy County. Dr. Rooks was formerly assistant physician at the Nevada State Hospital.

MISSOURI has established reciprocal relations with the licensing boards of the states of California and Mississippi on the basis of examination only for those who have been licensed since March 12, 1901.

F. E. ACKLEY of Kansas City was found guilty of manslaughter and sentenced to five years in the penitentiary for the death of a woman following a criminal operation said to have been performed by him.

THE Buchanan County Medical Society was entertained by Dr. C. R. Woodson, St. Joseph, on the occasion of the opening of the fall sessions, September 2. The meeting was a very enjoyable affair. About 100 members attended.

THE Christian Hospital, St. Louis, formerly located on Lawton Avenue, has purchased the building at 3540 North Grand Avenue. Improvements have been made to enlarge the capacity of the institution. It was opened for reception of patients on September 12.

AT a meeting of the heads and boards of managers of the state eleemosynary and penal

institutions of Missouri, held in Jefferson City, September 25, Drs. Scrutchfield and Bradley advocated the passage of a law to empower the superintendents to appoint all minor officials and employees.

THE Medical Association of the Southwest will hold its ninth annual session at Galveston, Texas, November 10 and 11. The program is varied. The orators are: General Medicine, Dr. Howard Fox, Jr., New York; Surgery, Dr. M. B. Clopton, St. Louis; Eye, Ear, Nose and Throat, Dr. Edward Jackson, Denver.

DR. J. W. CHARLES of St. Louis has been appointed a member of the board of managers of the Missouri School for the Blind at St. Louis, to succeed the late Dr. M. H. Post. Dr. Charles is a graduate of Washington University Medical Department, 1891, and was an assistant to Dr. Post for five years.

DR. CHARLES H. EYERMANN of St. Louis has been appointed chief resident physician of the St. Louis City Hospital to fill the vacancy caused by the resignation of Dr. R. H. Kinsella. Dr. Eyermann has been assistant dispensary physician for several months and served for two years as one of the interns of the City Hospital.

DR. RALPH KINSELLA, St. Louis, has resigned as chief resident physician at the City Hospital. He has accepted a fellowship at Columbia University, New York, where he will devote himself to research work. Dr. Kinsella graduated from the Medical Department of St. Louis University in 1911 and has been connected with the St. Louis City Hospital since that time.

MRS. J. W. CLARK, wife of DR. J. W. CLARK of Bois D'Arc, a member of the Greene County Medical Society, died at St. John's Hospital in Springfield, following injuries received in an accident caused by a runaway team colliding with an automobile driven by Dr. Clark. All the business houses in Bois D'Arc closed their doors during the funeral services.

BEGINNING with the September meeting, the Johnson County Medical Society will meet monthly. In the past this Society met quarterly, but the members decided that the interval between meetings was so long that the interest in society work was thereby diminished. At its first monthly meeting the Society adopted plans for the inspection of schoolchildren. In this they will have the cooperation of the school authorities.

DR. DORRIS E. WILHELM of Kansas City, a graduate of the University Medical College of Kansas City, 1907, was arrested and held for trial in the criminal court, charged with the death of a woman on whom it is said he performed a criminal operation. "I gave Dr. Wilhelm a gold watch worth \$25 for the operation," declared the woman in her dying statement. "and was to get the watch back when I paid him the money." The defendant did not offer any testimony.

THE Directors of the Panama-Pacific Exposition have announced most positively that the exposition will open on the date scheduled and that there is not the slightest question of postponing it on account of the European war. They state that nearly all the exhibits which had been promised will be in place on time, and that the success of the exposition is in no way a matter of doubt. It is quite probable that, if the war continues, a great many people will come out to see the exposition and travel through the western part of their own country who might otherwise have gone to Europe.—*California State Medical Journal*.

THE Fifth Annual Meeting of the American Association for Study and Prevention of Infant Mortality will be held in Boston, November 12-14. The subjects to be discussed will include, Prenatal Care, The Need for Increased and Improved Maternity Hospital Service, Institutional Mortality, Continuation Schools of Home-Making.

The American Association for Study and Prevention of Infant Mortality is one of the results of the conference on Prevention of Infant Mortality, held by the American Academy of Medicine at New Haven, Nov. 9-10, 1909. The Association was organized at the close of that meeting, and in January, 1910, an office was opened in Baltimore, from which the work has since been directed.

THE Travel Study Club of American Physicians, which made a successful Study Tour of Europe last year, has completed the plans for its 1915 Study Tour to the A. M. A. Meeting in San Francisco, Honolulu, Japan, the Philippines, China, with optional return via Siberia and Europe (war permitting) or via Canada. This being the first party of American physicians ever visiting the Far East and the new possessions of the United States, a most cordial welcome can be expected by authorities and members of the medical profession. The Travel Study Club would like to make its enterprise as representative as possible, and asks all those interested to communicate with the Secretary, Dr. Richard Kovacs, 236 East 69th Street, New York.

MEMBERSHIP CHANGES, SEPTEMBER

NEW MEMBERS

James R. Davis, Noble.
Edward E. Munser, Jefferson City.
Emmet E. Peterson, Nashua.

CHANGE OF ADDRESSES

Wm. E. Barton, Elling, Mo., to Woodriver, Ill.

Hans Lisser, St. Louis, to San Francisco, Cal.

Frank A. Lee, Los Angeles, Cal., to Skidmore, Mo.

J. H. Martin, Ironton, Mo., to Edgehill, Mo.

Maggie L. McCrea, Kansas City, to Sterling, Mo.

Clarence P. Pickett, Trenton, Mo., to Mercer, Mo.

Horace D. Quigg, Marshall, Mo., to Boonville, Mo.

Orrin C. Lowe, Kansas City, to Paola, Kan.

Joseph H. Peck, Mooresville, Mo., to Tooele, Utah.

Theron H. Slaughter, Humboldt, Ariz., to Miami, Ariz.

J. Louis Swarts, St. Louis to Clayton, Mo.

Thos. W. Taylor, Birmingham, Ala., to St. Louis.

L. P. Woodworth, New Madrid, Mo., to Little Rock, Ark.

Chas. A. Orr, Cairo, Mo., to Jacksonville, Mo.

RESIGNED OR DROPPED

C. E. Waller, Altamont.

Orrin C. Lowe, Kansas City.

Geo. A. Humpert, St. Louis.

A. A. Smith, Hermann.

Robert M. Miller, Belton.

Geo. W. Lott, Westboro.

DECEASED

Washington E. Fischel, St. Louis.

John C. Hallam, Centralia, Ill.

M. Hayward Post, St. Louis.

Ernst Saxl, St. Louis.

SINCE publication of New and Nonofficial Remedies, 1914, and of the supplement to New and Nonofficial Remedies, 1914 (July 1, 1914), the following articles have been accepted for inclusion with "N. N. R.":

Arlington Chemical Co.: Arleo Urease.

The Bayer Company, Inc.: Cymarin, Tablets Cymarin, Ampoules Cymarin Solution.

Fougera and Co.: Electrargol for Injection, 10 Cc. Ampoules.

Hynson, Westcott and Co.: Urease—Dunning.

Maltine Co.: Maltine Malt Soup Extract.

H. K. Mulford Co.: Hypodermic Tablets of Emetine Hydrochloride, Antidysenteric Serum in vials containing 50 Cc., Antipneumococcic Serum, Polyvalent, syringes containing 20 Cc. and vials containing 50 Cc., Antistreptococcic Serum, Polyvalent, vials containing 50 Cc., Antistreptococcic Serum, Scarlatinal, Polyvalent, vials containing 50 Cc. Typho-Serobacterin Mulford, Immunizing, syringes containing 1,000, 2,000 and 2,000 million killed sensitized typhoid bacilli.

Schieffelin and Co.: Typhoid Combined Vaccine (Prophylactic), vials and syringes containing three doses, 500 million killed typhoid bacilli and 250 million killed paratyphoid bacilli A and 250 million killed paratyphoid bacilli B, while the second and third dose each contain 1,000 million killed typhoid bacilli and 500 million each of killed paratyphoid bacilli A and A.

E. R. Squibb and Sons: Acne Vaccine, boxes of four syringes containing 25, 50, 100 and 200 million killed bacilli, boxes of two syringes containing 50 and 200 million killed bacilli, boxes of six ampoules containing 10, 25, 50, 100, 200 and 500 million killed bacilli, with syringes, and boxes of three ampoules containing 50 and 200 million killed bacilli with a syringe.

Bacillus Coli Communis Vaccine, boxes of four syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also boxes of two syringes containing 100 and 500 million killed bacilli and boxes of two ampoules containing 100 and 500 million killed bacilli, with a syringe.

Bacillus Pertussis Vaccine, boxes of four syringes containing 25, 50, 100 and 200 million killed bacilli. Also boxes of two syringes containing 50 and 200 million killed bacilli. Boxes of six ampoules containing 25, 50, 100, 200, 300 and 500 million killed bacilli, with a syringe, and boxes of two ampoules containing 50 and 200 million killed bacilli, with a syringe.

Diphtheria Antitoxin, syringes containing 2,000, 3,000, 4,000, 5,000, 7,500 and 10,000 units.

Gonococcus Vaccine, four syringes containing 100, 200, 350 and 500 million killed gonococci; boxes of two syringes containing 100 and 500 million killed gonococci. Boxes of six ampoules containing 50, 100, 150, 350, 500 and 1,000 million killed gonococci, with a syringe and boxes of two ampoules containing 100 and 500 million killed gonococci, with a syringe.

Meningococcus Vaccine, Curative, boxes of four syringes containing 100, 200, 400 and 500 million killed meningococci. Also boxes of two syringes containing 100 and 500 million killed meningococci. Boxes of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed meningococci, with a syringe, and boxes of two ampoules containing 100 and 500 million killed meningococci, with a syringe.

Meningococcus Vaccine, Immunizing, boxes of three syringes containing 100, 500 and 1,000 million killed meningococci.

Pneumococcus Vaccine, boxes of four syringes containing respectively 100, 200, 400 and 500 million killed pneumococci, boxes of two syringes containing respectively 100 and 500 million killed pneumococci; boxes of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed pneumococci, with a syringe, and boxes of two ampoules containing 100 and 500 million killed pneumococci, with a syringe.

Pyocyanus Vaccine, boxes of four syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also in boxes of two syringes containing 100 and 500 million killed bacilli.

Smallpox (Variola) Vaccine (Glycerinated), each dose in separate aseptic sealed glass tube, with bulb and needles. Boxes of five and ten tubes.

Staphylo-Acne Vaccine, boxes of four syringes containing 100 million killed staphylococci and 25 million killed acne bacilli, 200 million killed staphylococci and 50 million killed acne bacilli, 400 million killed staphylococci and 100 million killed acne bacilli, and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of two syringes containing 100 million killed staphylococci and 50 million killed acne bacilli and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of two ampoules containing 100 million killed staphylococci and 50 million killed acne bacilli and 500 million killed staphylococci and 200 million killed acne bacilli, with a syringe.

Staphylococcus Vaccine, boxes of four syringes containing 100, 200, 500 and 1,000 million killed staphylococci. Also boxes of two syringes containing 100 and 500 million killed staphylococci. Boxes containing six ampoules containing 100, 250, 500, 500, 1,000 and 2,000 million killed staphylococci, with a syringe, and boxes of two ampoules containing 100 and 500 million killed staphylococci, with a syringe.

Streptococcus Vaccine, boxes of four syringes containing 100, 200, 500 and 1,000 million killed streptococci. Also boxes of two syringes containing 100 and 500 million killed streptococci. Boxes of two ampoules containing 100 and 500 million killed streptococci, with a syringe.

Typhoid Vaccine, Curative, boxes of four syringes containing 100, 200, 500 and 1,000 million killed bacilli. Also boxes of two syringes containing 100 and 500 million killed bacilli. Boxes of 6 ampoules containing 200, 200, 500, 500, 1,000 and 1,000 million killed bacilli, with a syringe, and boxes of two ampoules, containing 100 and 500 million killed bacilli, with a syringe.

Typhoid Vaccine, Immunizing, boxes of three syringes containing 500, 1,000 and 1,000 million killed bacilli.

Waukesha Health Products Co.: Hepco Flour, Hepco Dodgers, Hepco Grits.

MISCELLANY

RESINOL SHOULD BE PUSHED

That Resinol should be pushed off the shelves of the druggists is perhaps indicated from the following excerpt of an advertisement which appeared in the P. D. of St. Louis:

"Beware of ointments just as good as Resinol. If a dealer tries to sell a substitute, it is for a very good reason of his own; read about it in the next column. This is why they do it. When a clerk tries to make you take a substitute for Resinol do not blame him, blame his employer. The clerk would rather sell you the genuine Resinol, he knows the doctors prescribe it, and that it heals skin troubles, etc., etc."

How deplorable that such goods have been put into the hands of the public through prescribing physicians. How contemptible to get the physicians to prescribe a remedy and if the article does not sell fast enough to please a grasping manufacturer it is foisted upon an unknowing public and by maligning the druggist.—*Bull. Retail Druggists' Assn.*

DO PHYSICIANS WRITE PRESCRIPTIONS MORE LEGIBLY TO-DAY THAN THEY DID A QUARTER CENTURY AGO?

J. G. Godding, Boston, Mass.—In my experience there has been a great improvement in legible prescription writing by physicians.

The past few years (say five) has also seen a change to more ethical prescription writing or the passing of writing for ready-made prescriptions due possibly to the propaganda by our profession and the Propaganda Reform of the A. M. A.

I am told by medical students here in the East that prescription writing is given but small attention in the medical schools or colleges. In consideration of all these different phases, think there has been a substantial gain for more and better prescription writing.

Chas. R. Sherman, Omaha, Neb.—My answer is emphatically "Yes."

It makes me shudder now to think of the awful scrawls called prescriptions with which I was confronted when working at the prescription desk at the period of, we will say, from 1880 to 1890. There seemed to be a prevailing opinion at that time that a certain distinction was gained by substituting a sort of "Cryptic scramble" in the place of writing when making a prescription.—*Meyer Bros. Druggist.*

DR. E. P. WHITFORD HONORED

More than 200 persons from various parts of Taney county thronged the Taneycomo Club last night to attend a farewell demonstration given in honor of Dr. E. P. Whitford, who will leave early next week for eastern New York.

his former home. The events of the evening were opened by a banquet in the dining-room of the club. Leading citizens of Hollister and other parts of Taney county made addresses during the after dinner program. Music and dancing were the diversion at the public reception after the banquet. Mrs. J. S. Butterfield of Lees Summit, Mo., Mrs. Charles Gray, Mrs. E. C. Conley, Mrs. R. B. Kite, Mrs. W. P. Chapman and other wives of Taney county club members were hostesses. The club house was decorated with autumn leaves and wild flowers.

Dr. Whitford has had a notable career as a physician in Taney county. He has done much work in isolated and mountainous sections of the county, and has frequently ridden fifty miles in the course of a day's visits. He has been an educator in matters concerning health and sanitation.—*Springfield Republican*.

SEX EDUCATION

We regret the position assumed at the meeting of the National Education Association by several of the speakers, that it is not the business of the public schools to take the responsibility of giving sex instruction to our boys and girls. We understand that this assertion, made in striking rhetorical language, provoked considerable applause from the audiences, the persons making up which were perhaps more influenced by the appeal to their feelings than by the intrinsic merits of the argument. Probably when they went home and quietly thought the matter over they regretted the applause which the eloquence of the speakers had elicited. For the same reason exists for giving instruction in sex subjects in our public schools as that which justifies and requires that we give instruction in the three R's or in any of the subjects now comprehended in the curriculum. That reason is fundamentally, that the welfare of the state requires that its citizens should be adequately informed and trained in these subjects. This is the reason for the very existence of the public school. Ignorance is a menace to the state. Therefore the state must see to it that its citizens are not ignorant. Theoretically it would be ideal if all parents would instruct their children in the three R's and in all other branches of learning. This would perfectly distribute the expense and fittingly place the responsibility. Those who have children should look after them and see that they are properly brought up.

But experience has shown that this theory does not work. It is not practical. For many parents cannot, and many more will not educate their children. Therefore the state must. Here is the reason why the public school exists. It has been established to do for its citizens the things that must be done for the sake of its own very life, and that will not be done if it does not itself do them.

Now this is the exact situation in relation to the question of sex instruction. The physical and moral interests of the community are directly involved. The direct consequences will ensue to the state if the children are left in ignorance, which is sure to lead to vice and disease that will be fatal to the public welfare. Ideally, as in the other case, the home is the place for instruction in these things. But as a matter of fact, few homes do, and most homes cannot, give proper instruction in sex subjects. The state is therefore obliged to do it through its established

agency for the dispelling of ignorance and the cultivation of knowledge and virtue.

There may be room for discussion as to how and when the school-teachers should take up the responsibility. Doubtless there is a right way and a wrong way to do it; a right age and a wrong age at which to take the matter up. Doubtless some teachers are better qualified than others to give information and instruction on these delicate subjects, with a maximum of good and a minimum of danger to our growing boys and girls. But the teachers cannot avoid the responsibility; and we deplore the utterances which would sweep aside with mere rhetoric so solemn an obligation, one so vitally related to the welfare of the state.—*Education*.

PUTTING IT OVER

Recognition of optometry by the board of trustees of the Ohio State University was made when a two-year course in that practice was authorized to be established in the department of physics.

This news item is exceedingly interesting. Whether it is intended to merely call a portion of the course in physical optics by the term "optometry" or whether it is intended actually to add to the usual course in physical optics practical experience in the actual refraction of eyes, has not yet been made clear.

What it does mean, however, is that at the next session of the legislature the optometrists will again endeavor to get a special measure providing for the licensing of optometrists. Who would deny to the students of the State University the right to exclusive exercise of their professional attainments after a two-year course in optometry? This will be their argument.

Evidently we are upon a time when the practitioner of medicine is to be licensed upon a graded scale of time spent in professional study. We hasten to suggest the following classification:

Faith cures, etc.—No time requirement.

Chiropraxy—Three months, by mail.

Chiropody—After due apprenticeship.

Optometry—Two years in Ohio State (applicable to newcomers only).

As evidence of the feasibility of such a classification the following quotations are appended:

"PERSONALS"

"Earn from \$1,000 to \$3,000 per year, the new profession, chiropractic; special course three months; certificate on graduation; study now, don't wait until laws are passed licensing this practice in your state; call or write, Pittsburg College of Chiropractic, Pittsburg, Pa."—*Adv. The Cleveland Plain Dealer*, July 19.

"Establishment of a teaching clinic in one of the Cleveland hospitals, where the poor may be treated free and chiropodists' apprentices give a special course of instruction, is the aim of Mrs. C. B. Knowles, 25 Colonial Arcade.

"Ohio chiropodists have organized a state association and they are working for the establishment of laws regulating the practice of chiropody in the state similar to those in operation in New York, New Jersey and Pennsylvania."—*Newspaper clipping*, Cleveland, August.

"Practically all eye strain is caused by mechanically or optically defective eyes, requiring perfectly adapted glasses for its relief. The legislatures of thirty-three states have enacted optometry laws solely to cover the fitting of glasses. These laws do not conflict with the rights of any medical profession nor do they give the optometrist any rights he did not

possess prior to their enactment. They merely establish a standard of competency to which he must conform.

"Why not let those who believe, or can be led to believe, that the shape of the eyeball can be changed effectively by drugging, select that method of treatment for themselves and let others be granted their inalienable right to consult men qualified by law, training and examination to serve their visual needs adequately? (Signed) Clark Sloan, Ohio State Optical Association."—The *Cleveland Plain Dealer*, July 23.

"We would further suggest that the University be required to issue handsomely embossed diplomas embellished with the seal of the State of Ohio and of suitable design for framing. The law should require that these be hung in a conspicuous place and that the recipient pay therefor a modest fee to cover the expense of printing.

"Incidentally the state might at the same time do away with the exacting requirements imposed upon practitioners of medicine and surgery, return their examination fee and further indemnify them for the unnecessary loss of time which the previous laws of the state have occasioned.

"If this does not sufficiently protect the rights of the various interests herein discussed let the state law provide that whoever has the price of painting a sign may herewith proceed to practice any and all of the professions without let or hindrance.—(J. E. T.)"—*Ohio State Med. Jour.*

WARNING AGAINST WORTHLESS ANTIFAT "CURES"

Department of Agriculture Tests Some of These "Remedies" on Its Own Employees and Finds Them to Be Valueless

WASHINGTON, D. C.

Numerous inquiries received by the United States Department of Agriculture indicate that promoters of so-called obesity remedies and fat-reducing cures are using an old trick dressed in new clothes to deceive fat people into spending money for worthless or dangerous preparations. The advertisements appeal to the vanity of people who wish to regain graceful figures and also to the business necessities of those who become so fat that they can no longer do their work efficiently.

In order to be able to give a definite reply to many people inquiring about specific remedies, the drug specialists of the United States Bureau of Chemistry recently conducted a series of tests with a number of nostrums of this character on employees in the department who wished to lose surplus flesh without injuring their health. One of the most widely advertised so-called prescriptions for reducing flesh was tried for a period of six months. The result was that two of the subjects under experimentation were obliged to stop after taking the medicine for two or three weeks because of its injurious effect. The third subject gained 2½ pounds instead of losing flesh. Another of the so-called remedies of a "Great Obesity Specialist" was tried. The subject scrupulously followed the diet list which accompanied this remedy and faithfully carried out the system of exercises recommended. After six months' treatment there was a reduction of 18 pounds of flesh but this the experimenters attribute to the fact that the subject ate no bread, butter, starchy food, pastry, sugar or candy while under observation. The first month after discontinuing the treatment the subject gained 10 pounds and in three months was back to the original weight recorded at the beginning of the treatment.

Judging from the letters received by the Department of Agriculture appealing to it to stop this practice under the Food and Drugs Act, women are usually the victims of these "professors." Much of the literature contains alleged statements of some individual woman's thrilling experience in fat-forming and fat-reducing, and this makes the situation seem real and personal to the other woman. Cases are on record where women have parted with almost their last dollar in the hope of improving their figures, and have awaited results with anticipation that makes their later disappointment almost pathetic.

These preparations usually contain thyroids and a laxative. The thyroids may prove very hurtful unless given under the advice of a physician personally familiar with the subject's physical condition. The department has on record an instance where death has followed overdoses of preparations containing thyroids. Other preparations contain poke root (*phytolacca*) a poisonous drug, and others, analysis shows, contain nothing that could possibly have the slightest effect in reducing flesh.

One product, examination shows, consists principally of ordinary soap. The idea is to apply this locally with friction and thus remove the fat wherever it may be in excess. A still more clever scheme provides chemicals to be added to the water in which the patient is to bathe. These chemicals are of such a nature that they form a sort of curd in the water after the patient has bathed. This curd, the advertisement states, is fat and surplus tissue removed from the body.

The only ways that the department's specialists know of safely reducing flesh are rigid dieting and strenuous exercise, and those to be effective must be continued over a long period of time. The fat reducing patient must eliminate from his diet fats, starchy foods and sugar. In many cases it is not wise because of other physical conditions for fat people to attempt any rapid reduction in weight. As a general rule diet and exercise are best directed by a skilled physician. Loss of flesh is by no means a blessing if accompanied by loss of health, energy or strength.

It is practically impossible to prevent the sale of these preparations in interstate commerce under the Food and Drugs Act for the reason that the claims on the packages are purposely so guarded as to evade action. As a rule the claims, guarantees, etc., appear in advertisements, circular letters, etc., and these the makers are very careful to keep separate from the package.

The Postoffice Department, however, has been instrumental in silencing some of these promoters by issuing fraud orders against them and denying them the use of the mails. The Department of Agriculture can only warn the people to beware of all such preparations containing such claims, for in the knowledge of all drug specialists at the present time there is no preparation that can be depended on to reduce flesh in any marked degree without doing injuries.

SOCIETY PROCEEDINGS

FIFTH DISTRICT MEDICAL ASSOCIATION

The Fifth District Medical Association met in conjunction with the Schnyler County Medical Society in Lancaster, Sept. 8, 1914. Dr. B. B. Potter, President, presiding.

Those in attendance were Drs. J. B. Bridges, H. E. Gerwig and A. J. Drake, of Downing; A. L. Davis, of Arbel; J. L. Statler, of Granger; W. H. Zieber, of Queen City; E. L. Mitchell, W. A. Potter, W. F. Jus-

tice, B. B. Potter, of Lancaster; J. H. Keller, of Glenwood; A. E. Platter and E. E. Parrish, of Memphis.

A general discussion was had concerning the consolidation of the Fifth and Sixth Districts to form one society. The consensus of opinion of those present was that the combining of the two districts together would make a much stronger society, and Drs. Statler and Parrish were appointed to confer with the Sixth District members and see what could be done.

The Committee on Constitution and By-Laws, appointed some time ago, read their report recommending a constitution and by-laws to conform with those of the State Medical Association. The report was received favorably and the committee discharged.

The Society then proceeded to take up the scientific program as follows:

"Mental Blindness," Dr. G. F. Foster, Memphis; "Diatetics," Dr. J. B. Bridges, Downing; A paper, J. L. Statler, Granger; "Some Law Points the Physician Should Keep in Mind," E. E. Parrish, Memphis.

Motion was made and carried that Dr. Statler's paper be sent to the State Association Journal for publication.

The Society then adjourned to the hotel where the Lancaster physicians served a bountiful supper to the visiting physicians. The Society will hold the next meeting in Kahoka at the call of the President.

E. E. PARRISH, M.D., *Secretary*.

BATES COUNTY MEDICAL SOCIETY

The Bates County Medical Society met in the Elks' Club Room in Rich Hill, Aug. 27, 1914, Dr. T. C. Boulware, President, presiding. Dr. C. J. Allen was appointed Secretary pro tem. The following members were present: Drs. E. N. Chastain, T. C. Boulware and T. C. Lockwood of Butler; Drs. W. H. Allen and C. J. Allen of Rich Hill; visitors, Dr. W. Calloway of Nevada and Drs. Comingo Griffith and P. T. Bohan of Kansas City.

A committee on resolutions on death of Dr. Lyle was appointed as follows: Drs. E. N. Chastain, W. H. Allen and C. A. Lusk.

Dr. Comingo Griffith of Kansas City read an excellent paper on "Vaccine Therapy" with case reports.

Dr. P. T. Bohan of Kansas City gave an interesting talk on diseases of the heart. His address was so clear and concise that the time passed too quickly.

Dr. C. A. Lusk was elected Secretary for the unexpired term of Dr. Lyle, deceased.

The society gave the visitors a vote of thanks. On account of the stormy evening there was a very light attendance.

The society adjourned to meet on the regular meeting day, the last Thursday in September.

C. J. ALLEN, M.D., *Secretary pro tem*.

BUCHANAN COUNTY MEDICAL SOCIETY

The regular meeting of the Buchanan County Medical Society was held at their rooms Wednesday evening, September 16, thirty-two members present. The minutes of the previous meeting were read and approved.

A letter from Dr. F. D. Johnson, secretary of the Missouri State Anatomical Board, was read placing at the disposal of the St. Joseph physicians all unclaimed bodies from St. Joseph for the purpose of dissection, with certain restrictions.

The executive committee was instructed to investigate the *Gazette's* advertising proposition and report at our next regular meeting.

The following applications for membership received their first reading and were referred to the board of censors for investigation and report: F. C. Beard,

endorsed by Drs. Boteler and Bansbach; E. A. Miller, endorsed by Drs. Lee and Bansbach; J. Kangisser, endorsed by Drs. Greenburg and Paul.

On motion of Dr. Boteler, seconded by Dr. C. R. Woodson, the president was instructed to appoint a committee for the purpose of taking charge of the entertainment of the Missouri State Medical Association in May, 1915. The following committee was appointed: Daniel Morton, Chairman, C. R. Woodson, F. Spencer, J. M. Doyle, W. T. Elam, H. S. Forgraves, O. G. Gleaves, C. A. Good and C. W. Fassett.

The discussion of Dr. Good's paper on "The Pathology and Treatment of Pernicious Anemia" was taken up and discussed by Drs. Caryl Potter, H. S. Forgraves, W. L. Kenney, C. R. Woodson, discussion closed by Dr. C. A. Good.

Dr. T. J. Lynch read an interesting paper on "Early Death from Hemorrhage Due to Ruptured Ectopic Tube" and reported two post-mortem cases. The following members took part in the discussion: Drs. H. S. Forgraves, E. Cook, Charles Geiger, Daniel Morton, J. F. Owens, A. E. Holley, Dr. Lynch closed the discussion. W. F. GOETZE, M.D., *Secretary*.

CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society met at the Palace Hotel, Fulton, September 10, at 11 a. m., Dr. Major in the chair. There were present Drs. Major, Owen, Pryor, Biggs, Hirsch, Hill, McCall, Blackburn and Yates; visitors, Drs. G. W. Robinson and Gordon A. Beedle of Kansas City; Dr. W. T. Lemon, Fulton, and Drs. Clark, Enloe and McCutchen of Jefferson City.

After the reading of the minutes, disposing of some routine business and informal discussion of general topics, the members and guests took dinner at the hotel.

In the afternoon Dr. Crews read an interesting paper on "Pellagra," which was discussed by Drs. Robinson, Biggs and Major.

Dr. Blackburn read a paper on "Pulmonary Tuberculosis." The discussion was opened by Dr. Owen and followed by Drs. Crews, Clark, Beedle and Yates.

A clinic was presented by Dr. McCall of a case presenting some symptoms of gall-stones accompanied by a marked neurotic condition. Examination was made by Drs. Beedle and Robinson and discussed by them although an exact diagnosis was not made.

Dr. Beedle read an interesting paper on "Surgical Considerations of Tuberculous Joints," which was discussed by Dr. McCall.

Dr. Robinson read an exhaustive paper on "The Autoserosalvarsan Treatment of Paresis, Tabes and Other Luetic Conditions of the Central Nervous System." The discussion was general and participated in by the members.

A vote of thanks was extended to the visitors for their presence and participation in the proceedings.

M. YATES, M.D., *Secretary*.

The Callaway County Medical Society met at the Palace Hotel, Fulton, September 18. Visiting physicians were Drs. Gordon A. Beedle and G. W. Robinson of Kansas City; Drs. Clark, Enloe and McCutcheon of Jefferson City; Dr. Hirsch of Shamrock; Dr. H. R. Hill of Bachelor and Dr. H. B. Pryor of Boydsville.

In the forenoon Dr. Gordon A. Beedle and Dr. G. W. Robinson favored the gathering with interesting treatises. Dr. Beedle spoke on "Surgical Consideration of Tubercular Joints," and Dr. Robinson's

subject was, "Treatment of Ailments of the Nervous System."

Local physicians also contributed to the program and among those who presented papers and entered into the discussions were Drs. R. N. Crews, Quinn Blackburn, H. I. Owen, G. D. McCall and M. O. Biggs.

The afternoon session was featured by a case presented by Dr. G. D. McCall on which the physicians were divided as to a diagnosis. It was a question as to whether the patient was afflicted with an internal or nervous trouble and symptoms indicated that it could be one of five ailments. It furnished a most interesting study and physicians say that a laboratory test may be necessary before the exact nature of the ailment can be determined.

The visiting physicians were entertained at dinner by the society. M. YATES, M.D., Secretary.

CAPE GIRARDEAU COUNTY MEDICAL SOCIETY

The August meeting was held at Jackson. We had quite an enthusiastic session, the following members being present: Drs. Henderson, Nienstedt, Schulz, Seabaugh, Statler, Vinyard and Yount.

Dr. Van Amburg of Burfordville was a visitor and took an active part in the discussions and case-reports from his practice.

Dr. Schulz reported some surgical cases from practice and exhibited specimens removed from cases reported. The cases were of unusual interest and all members present expressed their pleasure and appreciation for their presentation.

MEETING OF SEPTEMBER 14

The Society met in regular session in Cape Girardeau, September 14, with the following members present: Drs. Atkins and Bienstedt of Jackson, Dr. Statler of Oak Ridge, Drs. Hope, Howard, Porterfield, Schulz, Wilson, Wichterich and Yount of Cape Girardeau. Dr. Statler in the chair.

A resolution passed by this Society in meeting of April 14, 1905, was brought to light and warmed up for future use. The resolution reads:

Resolved: That this Society considers unethical the appearance of a practitioner's name in connection with any case published as a news article. Any doctor whose name so appears should be assumed guilty of the indecorum of advertising.

The following committee was appointed to inform the press of this county of the Society's action and request conformance as far as possible in future: Drs. Yount, Wichterich and Wilson.

Dr. E. H. G. Wilson read a paper on "Uncinariasis," with case reports from practice. The discussion was general, although most of the members said they had had no such cases, or if so had not recognized the condition as such. The paper was well prepared and received attention by all present.

All signs indicate good meetings for this Society the next two months. Our December meeting is a business one without formal program except refreshments and a good time in general.

W. E. YOUNT, M.D., Secretary.

GREENE COUNTY MEDICAL SOCIETY

After a two months' vacation the Greene County Medical Society met in regular session at Springfield, Friday, September 11. Twenty-one members and two visitors were present, the same enthusiasm being manifest as formerly.

Resolutions were adopted requesting the prosecuting attorney to use all means in his power to bring illegal practitioners to a speedy trial. It seems as though there is a tendency on the part of county officials to postpone, delay, reset or otherwise dispose of such matters from time to time, and this action does not meet the approval of the medical profession.

The program for the evening consisted of a symposium on Appendicitis; Dr. Potts referring to the medical aspect and Dr. Lowe, the surgical. These papers dealt with clear, plain facts gained by personal observation of the essayists, and were very interesting and instructive. The papers were discussed by Drs. Horst, Russell and Anderson.

On Friday, September 25, Dr. Bondurant Hughes, superintendent of the State Tuberculosis Sanatorium at Mt. Vernon, is to address the society on some subject relative to tuberculosis. We predict a very profitable meeting at this time.

THOS. O. KLINGNER, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

Howard County Medical Society met with Drs. Richards and Smith at Fayette, September 4, at 2:30 p. m., Dr. Payne in the chair. Members present, Drs. Bonham, M. N. and N. E. Smith, Lewis, Moore, Fleet, Vaughn, Champion, McGee, Payne and Watts. Visitors, Drs. McAlester, Moss, Nifong, Gordon, Kampschmidt and Martin of Columbia; Dr. White of New Franklin.

By vote the regular order of business was dispensed with and one and one-half hours were devoted to the memorial service of Dr. U. S. Wright. The visiting doctors gave interesting tributes of respect to his memory as a citizen, physician and Christian gentleman, and the members did likewise.

At 4:30 p. m. the society adjourned to meet Friday, October 2. C. W. WATTS, M.D., Secretary.

The Howard County Medical Society met at Fayette at 2:30 p. m., October 2, with President Payne in the chair. The minutes of the September meeting were read and approved. Members present, Drs. Pritchett, Kitchen, Temple, Richards, Bonham, Lee, Payne and Watts.

Dr. Richards reported a case of a girl infected by a rusty nail. After cleansing the wound he used serum.

Dr. Pritchett reported a case of a boy who was struck with an oyster can full of rocks, causing a wound over the left eye. The patient died twelve days after in severe convulsions and lockjaw.

Dr. Temple read a very interesting and instructive paper on tonsillitis and adenoids. His treatment was unique and highly complimented. Discussion by Dr. Pritchett and others.

By unanimous vote Dr. Lee was requested to deliver a lecture on serum therapy.

The secretary reported three delinquents in payment of dues for 1914.

The secretary announced that officers for 1915 would be elected at the meeting of November 6, 1914. Society adjourned at 3:45 p. m.

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

HOWELL COUNTY MEDICAL SOCIETY

The Howell County Medical Society met at the K. P. Hall, West Plains, at 1:30 p. m., September 17, after a sumptuous luncheon at the Arcade Hotel, at which the out-of-town doctors were entertained. Dr. J. H. Elliott, the president, being temporarily absent.

the meeting was called to order by Dr. H. J. Rowe of Willow Springs. Those present were Drs. Elliott, Shuttee, Rowe, Black, Bess, Bingham, Hendrix, Weusthoff and Thornburgh. The minutes of the previous meeting were read and approved.

Dr. A. H. Thornburgh read a paper on secondary infections, in which he called attention to the many and varied conditions that may arise during or after the cessation of a primary infection. He gave an extended list of the complications met with during the course of the commoner diseases. The paper was liberally discussed by the members present.

Dr. H. C. Shuttee, President of the State Medical Association, was present and gave a very interesting address. During the course of his remarks he described his trip to the meeting of the American Medical Association at Atlantic City in June. This address was full of interesting and instructive incidents, and made it apparent that every member of the Association ought to bend every effort to attend the meetings.

Dr. James H. Elliott, councilor for this district and delegate to the State Medical Association meeting held at Joplin in June, made his report. He said the by-laws of the State Association had been amended so that the House of Delegates would meet the first day of the annual session and complete its work at that time. This will allow delegates to attend the scientific sessions during the remainder of each meeting. The by-law providing for the defense of members against malpractice suits was amended so that the committee shall not expend more than \$100 on any one case. This was done on the recommendation of the Defense Committee, it having reported a rapid growth in the number of suits and a marked increase in the expense attached. The Defense Committee reported that its usefulness to the members was far greater from the moral standpoint than from the monetary viewpoint.

The by-law providing for orators on medicine and surgery was rescinded and the election of president was made to occur in the House of Delegates instead of at the general session on the last day of the meeting. The object of putting all this legislative work in the House of Delegates was for the purpose of increasing the importance of the scientific work and permitting a larger attendance at the scientific sessions.

The highest honor within the gift of the profession was conferred on the Howell County Medical Society by the choice of one of its most respected and beloved members, Dr. H. C. Shuttee, for President. Dr. Elliott described the short but earnest campaign he waged in Dr. Shuttee's behalf when he learned after the meeting commenced that the President would be chosen this year from the members outside of the large cities. He expressed supreme gratification with the attitude of the members toward Dr. Shuttee's candidacy and their faith and confidence in him and for the splendid support accorded him for the honor. He said Dr. Shuttee did not know his name was under consideration for this high honor and was quite unaware of his election until Dr. Elliott greeted him with the welcome tidings, "Mr. President."

The Howell County Medical Society certainly appreciates this great honor, and feels under many obligations to its energetic delegate, Dr. Elliott, and his friends who labored so untiringly to bring this coveted honor to our district.

Knowing Dr. Shuttee as we know him, we are sure he will fill the chair with honor to himself and credit to this section of the state, and by his energy and labor will do much to strengthen the Missouri State Medical Association. A. H. THORNBURGH, M.D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY

The Johnson County Medical Society met in regular session Tuesday, September 8, in the Court Room of the Court House.

Dr. M. P. Shy of Sedalia, formerly of Knobnoster, and a member of our society, read a paper on the subject, "Tic Douloureux and Its Treatment by Deep Injections of Alcohol."

The society took up the question of medical inspection of schoolchildren with the result that a plan was partially inaugurated whereby the schoolchildren of Johnson county may receive gratuitous medical inspection. This is a step which has been long contemplated by the pedagogical and medical fraternities of the county and we believe is a forward movement in the economic and scientific achievement of the community.

Last month the society voted to hold monthly meetings. The interest which the members display in the purposes of the society seems to prove that frequent meetings serve as a constant reminder that "something is doing"; a most needed attribute in the progress of a county medical society.

Business of much importance to the medical fraternity is pending further action and will be well worth reporting later.

We have found that live problems must be kept constantly before the members to make a live society. An organization must always have a "job"—something to do—and those enterprises must be worthy of the consideration of the membership.

O. B. HALL, M.D., Secretary.

JOINT MEETING OF KNOX AND SCOTLAND COUNTY MEDICAL SOCIETIES

A joint meeting of the Knox and Scotland County Medical Societies was held in the Hotel Baring, Baring, on Tuesday, August 4. Dr. G. S. Brown, President Knox County Medical Society, presiding. Members present were, Drs. Geo. S. Brown, H. H. St. John, H. J. Jurgens, J. Keane, F. E. Luman, Wallace Petty, J. W. Petty, E. E. Parrish, A. L. Davis, P. M. Baker, A. E. Platter, Fred. Reilley, H. E. Bullock, J. L. Statler, G. F. Forster, J. W. Haden.

The following papers were read: "Infantile Diarrhea," by Dr. F. E. Luman, Baring; "Cholera Infantum," by Dr. James Keane, Edina; "The Perineum and Its Difficulties," by Dr. A. E. Platter, Memphis; "Uremic Poisoning," by Dr. P. M. Baker, Memphis; "Pick-Ups in Typhoid Therapy," by Dr. E. E. Parrish, Memphis; "Fractures of the Humerus," by Dr. H. J. Jurgens, Edina. These papers were all thoroughly discussed by the members present.

Dr. J. W. Haden of Plevna presented a very interesting clinic which proved to be a case of brain tumor, of either luetic or tubercular origin.

It was decided to hold another joint meeting at Rutledge on September 10.

H. J. JURGENS, M.D., Secretary.

LAWRENCE-STONE COUNTY MEDICAL SOCIETY

The Lawrence-Stone County Medical Society met at Aurora, Sept. 1, 1914. The meeting was called to order at 10 a. m. by the president, Dr. H. L. Kerr. The following physicians were present: Drs. F. S. Stevenson, C. A. Moore, D. C. Adams, T. D. Miller, R. C. Robertson, J. P. Andrews, W. S. Loveland, J. W. Smith, H. L. Kerr, L. Henson, L. S. Shumate, J. A. Melton. Visitors: Drs. H. A. Lowe, C. W. Rus-

sell, M. C. Stone, C. E. Fulton and E. C. Roseberry of Springfield.

The regular program was not taken up at the morning session. The time was taken up with case reports from several of the members present.

At 11:30 the society adjourned for lunch and met again at 1 o'clock when the following program was rendered:

"Appendicitis," Dr. C. W. Russell, Springfield; "Nephritis in Pregnancy, with Report of case," Dr. F. S. Stevenson, Aurora; "Report of a Case of Amebic Dysentery," Dr. R. C. Robertson, Aurora; "What Is the Legitimate Relation of the Physician to the Patient," Dr. J. P. Andrews, Marionville.

The society adjourned to meet at Aurora, Dec. 1, 1914. R. C. ROBERTSON, M. D., Secretary.

PIKE COUNTY MEDICAL SOCIETY

The Pike County Medical Society held its regular monthly meeting in the office of Dr. J. E. Bankhead at Clarksville, Monday, September 7. The following members were present: Drs. C. L. Bankhead and R. J. Guy of Paynesville; Drs. T. Guy Hetherlin and J. W. Dreyfus of Louisiana; Drs. J. E. Bankhead and E. M. Bartlett of Clarksville and Dr. F. V. Keeling of Elsberry.

The president, Dr. E. M. Bartlett, read a very interesting paper on "Infantile Convulsions," which brought forth a general discussion.

Several interesting cases were reported and discussed.

Dr. J. E. Bankhead, Dr. D. M. Pearson and Dr. C. E. Gibbs were appointed a committee to appear before the county court at their next meeting and ask for free toll for the doctors of the Pike County Medical Society in view of the fact that the members of the society do an immense amount of charity work that would fall as a burden on the county were it not for the charitableness of the profession.

The meeting adjourned to meet in Louisiana, October 5. F. V. KEELING, M.D., Secretary.

POLK COUNTY MEDICAL SOCIETY

The Polk County Medical Society met at the Cary Hotel at Bolivar at 11:30 a. m., September 8, and was called to order by the president. The following physicians answered to roll call: Drs. R. Lee Russell, R. W. Paris, A. J. Stufflebam, R. D. Dill, L. L. Hunt, A. P. Mitchell, W. G. Drake, J. E. Loafman, C. N. Hahn, W. D. Drake and J. F. Roberts, also Dr. Rosco C. Nevins of Flemington; and visitors, Drs. S. A. Johnson, T. O. Klingner and G. W. Barnes of Springfield.

The minutes of the last meeting were read and approved.

The Board of Censors reported favorably on the application for membership of Dr. D. E. Hammontree of Half Way, who was on motion voted a member of the Polk County Medical Society.

Dr. T. O. Klingner, district councilor of Springfield, delivered a very interesting address on "The County Medical Society."

Dr. C. N. Hahn and Drs. A. J. Stufflebam reported cases to the society.

Dr. L. L. Hunt reported a case of tuberculosis of lungs with treatment, and also one of double pleural effusion with treatment, which were discussed.

The society, after adjourning an hour for dinner, reconvened at 2 p. m.

On motion, Drs. T. O. Klingner and G. W. Barnes from the Greene County Medical Society, were elected honorary members of the Polk County Medical Society.

Dr. R. C. Nevins, a member of the Hickory County Medical Society, but now of Flemington, Polk County, made written application by transfer for membership in Polk County Medical Society.

Dr. S. A. Johnson read a very interesting paper on "Eugenics and Heredity in Mental and Nervous Diseases," which was discussed by all present.

It was moved and carried that Polk County Medical Society invite Dallas County to join with them until such time as Dallas County can organize a society of its own.

On motion the society adjourned to meet again at Bolivar on the second Tuesday in December.

J. F. ROBERTS, M.D., Secretary.

RALLS COUNTY MEDICAL SOCIETY

The Ralls County Medical Society met in regular session at Spalding Springs, August 27, where a beautiful day, a splendid dinner, a pleasant outing and a good program greeted the members and visitors. Doctors from Marion, Monroe and Pike counties were in attendance and at least one hundred and fifty Ralls County citizens met with us. Among those in attendance were Drs. E. H. Bounds, William H. Hays, John J. Farrell and R. M. Winn of Hannibal; Dr. T. Guy Hetherlin of Louisiana; Drs. W. S. Harwood, J. N. Southern and W. T. Rutledge of Monroe City, while little Ralls was represented by Dr. H. B. Norton of Center, Dr. W. T. Waters, Col. Joe Burnett, editor The Ralls County Record, and Dr. T. J. Downing of New London.

Dr. T. Guy Hetherlin read a paper on "Eclampsia." Both the laity and the profession gave the doctor undivided attention while reading his paper.

Dr. H. B. Norton read a splendid paper on "Vaccine and Serum Therapy as a Rational Treatment of Disease."

Dr. R. M. Winn read a paper on "Care of the Special Senses of Children." There being so many of the laity present, Dr. Winn's paper should accomplish great good.

The paper of Col. Joe Burnett was the success of the evening.

"The Duffield Method of Resuscitation of the New-Born" was clearly demonstrated by Dr. T. Guy Hetherlin.

Dr. T. J. Downing gave a report of three cases of inoperable cancer of the uterus, unsuspected by the patient and family and discovered only when the doctor was called.

This was a most enthusiastic and successful meeting. Every paper was fully discussed and every doctor took an active part.

We have elected Col. Joe Burnett an honorary member of the Ralls County Medical Society. We believe that a local editor in the county society would mean much in the bringing together of the laity and organized medicine.

T. J. DOWNING, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, 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."

HEPCO FLOUR.—A flour prepared from the Soya bean. It is claimed that clinical trial has shown that the small percentage of carbohydrates in Hepco Flour is in the main not sugar-producing, and that it therefore is a suitable food material in cases in which carbohydrates are contra-indicated, as in diabetes, amyloseous dyspepsia, etc. Hepco Flour is also sold in the form of biscuits as Hepco Dodgers and a granulated "breakfast food" as Hepco Grits. Waukesha Health Products Company, Waukesha, Wis. (Jour. A. M. A., Sept. 26, 1914, p. 1113).

PROPAGANDA FOR REFORM

DIGALEN OMITTED FROM N. N. R.—In view of increased extravagance regarding the claims made for Digalen by the Hoffmann-LaRoche Chemical Works the Council on Pharmacy and Chemistry decided to investigate the present eligibility of Digalen. Examination demonstrated that the asserted presence in Digalen of "amorphous digitoxin" was not substantiated by evidence, that Digalen and Digalen Tablets were not constant in composition and action and that the claim that Digalen causes less gastric disturbances than digitoxin was unfounded. While the manufacturer promised to hold the claim that Digalen contained "amorphous digitoxin" in abeyance, they refused to concede the variable composition of Digalen and reasserted that Digalen was less liable to cause gastric irritation than other digitalis preparations. In view of the overwhelming evidence that Digalen is variable in action and in composition and that it produces the same gastric disturbances as other digitalis preparations, the Council voted that Digalen and Digalen Tablets be omitted from N. N. R. (Jour. A. M. A., Sept. 5, 1914, p. 881).

DOSE OF DIPHTHERIA ANTITOXIN.—While 3,000 units, the dose given in the Pharmacopoeia, probably is a sufficient initial dose in many cases, this quantity is not enough to satisfy the factor of safety. There is a growing opinion that no case of diphtheria should receive less than 10,000 units as the initial dose (Jour. A. M. A., Sept. 5, 1914, p. 873).

VACCINATION AGAINST SMALL-POX AND TYPHOID.—In view of the war, a general revaccination of the population of Paris has been ordered and huge quantities of antityphoid serum have been prepared (Jour. A. M. A., Sept. 5, 1914, p. 873).

ANGIER'S EMULSION.—A report of the Council on Pharmacy and Chemistry points out that when Angier's Emulsion, Angier Chemical Co., Boston, Mass., was first put on the market it was advertised as a "food-medicine" and an "Ideal Substitute for Cod Liver Oil." Although the manufacturers now advertise this product as a laxative and state it to be "purely mechanical in its action" they still mingle with the new ones the old claims of "tonic and reconstructive merits" and thus attempt to perpetuate the erroneous belief that the preparation has nutritive value. As to the identity of the petroleum product contained in the preparation, regarding which the advertising circulars make contradictory statements, the American Medical Association Chemical Laboratory reports that this has all the properties of soft yellow petrolatum (Jour. A. M. A., Sept. 12, 1914, p. 962).

ANGIER'S THROAT TABLETS.—These tablets are stated to be composed essentially of elm bark and petroleum and yet are claimed to "promote appetite and aid digestion." The American Medical Association Chemical Laboratory reports the tablets to contain about 12 per cent. of soft yellow petrolatum, like that found in Angier's Emulsion (Jour. A. M. A., Sept. 12, 1914, p. 964).

ANTISEPTIC ACTION OF HEXAMETHYLENAMIN.—The former opinion that hexamethylenamin possesses antiseptic action independently of the liberation of formaldehyd, was an assumption not founded on reliable experimental evidence. The recent investigations of Burnam, Hanzlik and others have shown that its action as an antiseptic depends on the decomposition into formaldehyd and ammonia which occurs only in an acid medium (Jour. A. M. A., Sept. 12, 1914, p. 962).

VACCINE VIRUS NOT CONTAMINATED.—A study of cases shows that vaccinal tetanus is not due to contaminated vaccine virus. Further, since the law regulating the sale of biologic products in 1902 went into effect, there have been examined in the Hygienic Laboratory of the U. S. Public Health Service over 1,500,000 doses of vaccine virus without a single specimen having been found to contain tetanus spores. Also, experiments indicate that tetanus will not be produced even if the virus used contains tetanus spores. Most cases of vaccinal tetanus are due to infection after vaccination (Jour. A. M. A., Sept. 19, 1914, p. 1032).

SODIUM VERSUS POTASSIUM SALTS.—The probable shortage of potassium salts due to the war suggests that sodium salts may in most cases be substituted without disadvantage. In general potassium salts have no marked superiority over the corresponding sodium salts. While the potassium compounds are said to be more active and to possess a more diuretic effect, the sodium salts are less depressing to the heart and in some instances less disagreeable to the taste. Sodium iodid, sodium bromid, sodium acetate, sodium citrate, etc., are just as effective as the corresponding potassium salts (Jour. A. M. A., Sept. 19, 1914, p. 1034).

SANATOGEN.—Testimonials for Sanatogen are published which show good results in cerebral concussion, alcoholic gastritis, anemia, etc. The patient is given a chance to recover by rest, a proper diet and Sanatogen—and the recovery is attributed to Sanatogen. Based on some biologic experiments the exploiters of Sanatogen assert that "Sanatogen acts as a strong stimulus as far as the recuperative powers of the blood are concerned." These experiments were repeated by Prof. A. J. Carlson of the University of Chicago, using Sanatogen, casein, casein and glycerophosphates, milk, and crackers and milk. Professor Carlson's experiments show that the effects produced by Sanatogen are not different from those obtained when casein, casein and glycerophosphates, milk, and crackers and milk are used (Jour. A. M. A., Sept. 26, 1914, p. 1127).

VALUE OF TALCUM POWDERS.—The action of talcum powders on the skin depends on their protective and dehydrating properties. On the other hand they tend to form crusts and pastes, due to mixture of the powder with sweat or other secretions. There is doubt if the boric acid in talcum powders can exert

any antiseptic action. The action of the salicylated talcum powder of the National Formulary, though containing 10 per cent. of boric acid, depends on its salicylic acid. Commercial talcum powders contain small amounts of various antiseptics and perfuming agents and have little value from a therapeutic point of view (*Jour. A. M. A.*, Sept. 26, 1914, p. 1129).

LIQUID SOAP.—The following economical formula has been proposed. It may be flavored and colored to suit: Sodium hydroxid 55 gm., potassium hydroxid 65 gm., cottonseed oil 800 c.c., alcohol 500 c.c. and water to make 5,000 c.c. (*Jour. A. M. A.*, Sept. 26, 1914, p. 1129).

SIGNIFICANCE OF THE WORD "LUTEIN."—The word "Lutein" has long been applied in physiologic chemistry to designate a group of fat-coloring matters which occur in nature and which have more recently also been given the general designation of lipochromes. As a rule the use of the term has been restricted to the yellow coloring-matter which develops in the ovarian structures. It is unfortunate that lately various preparations of desiccated corpora lutea from animals are being sold as lutein (*Jour. A. M. A.*, Sept. 26, 1914, p. 1119).

BOOK REVIEWS

BEDSIDE HAEMATOLOGY. An introduction to the clinical study of the so-called blood diseases and of allied disorders. By Gordon R. Ward, M.D., Fellow Royal Society of Medicine, London, etc. Illustrated, pp. 394, W. B. Saunders Co., Philadelphia and London, 1914.

The volume before us fills a long felt want in medical literature. Pathological investigation of "blood diseases" has overshadowed "bedside" study of these diseases and it is with the clinical aspects of the subject that the volume is concerned.

MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers Dacosta, M.D., LL.D., and Samuel D. Gross, Professor of Surgery, Jefferson Medical College, Philadelphia, etc., seventh edition, revised, enlarged and reset, with 1,085 illustrations, pp. 1,515. W. B. Saunders Co., Philadelphia and London, 1914.

Dacosta's surgery is one of the living classics of medicine. The seventh edition amply fulfils the high requirements set by former editors; the text has been reset, many new illustrations have been added and the whole has been brought up-to-date.

TEN SEX TALKS TO BOYS (10 years and older). By Irving David Steinhardt, M.D., illustrated, pp. 187. J. B. Lippincott Co., Philadelphia and London, 1914.

TEN SEX TALKS TO GIRLS (10 years and older) by Irving David Steinhardt, M.D., illustrated, pp. 193. J. B. Lippincott Co., Philadelphia and London, 1914.

The difficulties that lie in the way of an approach to the subject embraced by the two volumes announced above are universally recognized. Of all the books upon the subject which we have seen, the two books by Dr. Steinhardt are the sanest by far.

INFANT FEEDING. By Clifford G. Grulee, A.M., M.D., Assistant Professor of Pediatrics at Rush Medical College, Chief of Pediatric Staff, Cook County Hospital. Second edition, thoroughly revised. Octavo of 314 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$3 net.

In this second edition the author has taken advantage of the helpful criticisms bestowed upon the first by critics. The scientific data, which is the fruit of the past two years, has been embodied in the work, which is now one of the few really worth while volumes on the subject extant.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in medical and surgical sciences, edited by Hobart Amory Hare, M.D., and Leighton F. Appleman, M.D. Octavo of 339 pages, illustrated. Philadelphia and New York: Lea and Febiger, 1914. Price per year, paper, \$6.

The subjects effectively treated in the September number are: Diseases of the Thorax and its Viscera, including the Heart, Lungs and Bloodvessels, by William Ewart, M.D., F.R.C.P.; Dermatology and Syphilis, by William S. Gottheil, M.D.; Obstetrics, by Edward P. Davis, M.D., and Diseases of the Nervous System, by William G. Spiller, M.D.

MODERN MEDICINE: ITS THEORY AND PRACTICE IN ORIGINAL CONTRIBUTIONS BY AMERICAN AND FOREIGN AUTHORS. Edited by Sir William Osler, Bart., M.D., F.R.S., and Thomas McCrae, M.D. Vol. ii, second edition, thoroughly revised. Illustrated. Lea & Febiger, Philadelphia and New York, 1914.

The profession will be glad to welcome a second edition of volume two of Modern Medicine, which comes out, as its predecessor appeared, under such brilliant auspices. The work is divided into six parts: Protozoan infections; diseases caused by animal parasites; diseases caused by physical agents; diseases due to chemical and organic agents; diseases of metabolism and diseases of the respiratory tract.

PRACTICE OF SURGERY. By James Gregory Mumford, M.D., with 683 illustrations. Second edition, thoroughly revised. W. B. Saunders Company, 1914. Philadelphia and London.

This comprehensive and extensive work which was so generously received by the profession in its first edition, is brought wholly up to the present-day methods of acceptable surgery. Proceeding upon the basis that a general surgeon is well grounded in his practice, the author has not attempted, he says, "to deal comprehensively, accurately and skillfully with all branches of surgery." He has, therefore, given an account of surgery as it is seen at the bed-side, in the accident ward and in the operating room, so that the student will find a practical description of all general surgical ailments that he might be required to alleviate.

The book is written in a somewhat unconventional manner as regards the order in which subjects are discussed. Dr. Mumford has presented these subjects in their order of interest, importance and frequency, hoping that by such a plan he could present the subjects in their true perspective.

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

PUBLICATION } W. H. BREUER, M.D., Chairman
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ORIGINAL ARTICLES

STATUS LYMPHATICUS AND STATUS HYPOPLASTICUS AND THEIR RELATIONSHIP TO THE GLANDS OF INTERNAL SECRETION *

W. W. DUKE, PH.B., M.D.
KANSAS CITY, MO.

Status lymphaticus and status hypoplasticus are rarely considered in general medical practice and yet they represent very common conditions and their recognition is often of value in the diagnosis and prognosis of other diseases with which a patient may be afflicted. As I reflect over conversations concerning cases which I have seen with older men of broad experience, I cannot help believing that the diagnosis and prognosis which they have based occasionally on what they proudly termed "intuition" has in reality been based on an unconscious observation of various lymphatic or hypoplastic stigmata of which I shall speak. It is evident that any grouping or classification of such stigmata which would enable men of less experience to recognize and interpret them scientifically would be a valuable addition to our knowledge.

A very important contribution to our knowledge of the subject has recently been made by Julius Bartel. While making a histologic study of the lymph-glands in status lymphaticus, Bartel noted an increase in the connective tissue stroma of the glands in addition to the general hyperplasia of lymphoid elements which gives rise to the general enlargement. The change in the stroma is discernable in infancy, and gradually increases with age, the rate of increase appearing to be most rapid at or soon after puberty. At this time the lymphatic elements usually diminish in number and often the glands decrease in size. This condition has

been termed an atrophic stage of status lymphaticus. It was noticed further that the proliferated connective tissue was not scattered irregularly throughout the gland, but lay chiefly along the course of the blood-vessels. This constitutes an architecture which Bartel considers characteristic of the disease. Histologic pictures which Bartel and others believe analogous to this have been found in the thymus by Kyrle; in the ovaries by Bartel and Hermann, and in the adrenals of two young individuals presenting signs of status lymphaticus by Wiesel. Neusser mentions having noticed frequently a combination of status lymphaticus with cirrhotic processes and polyserositis of non-tuberculous origin. From these observations and also from the frequent occurrence of hypoplastic stigmata in lymphatic individuals, Bartel, Neusser and others have been led to believe that status lymphaticus is in reality not a disease in itself, but rather may be looked on as part of a generalized hypoplastic constitution of status hypoplasticus. It has been suggested, and I think with reason, that in individuals with the so-called hypoplastic constitution there exists a congenital or early acquired weakness of the parenchymatous elements in the body which tends to cause their early atrophy and replacement with connective tissue. It is certain that their tissues do not stand the strain of life as well as others, and the development and symptoms of the patients suggest faulty activity of various organs of internal secretion.

It is not my purpose in this paper to discuss at length the pathology of the glands of internal secretion. I should like, however, to illustrate by a few well-known examples the profound influence which these glands may have on the body principally for the purpose of convincing you that the smaller and more generalized involvement which is so frequently observed in status hypoplasticus is worthy of serious consideration. First I should like to call attention to the difference in size between a well-known type of dwarf whose deformity is a consequence of partial destruction of the pituitary

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting, held at Joplin, May 12-14, 1914.

gland, and the seven-foot giant whose enormous overgrowth results from hyperactivity of the same organ; also to the extraordinary differences in size, mentality and metabolism of a cretin (congenital hypothyroidism) and that of a normal child; also to the striking difference in the appearance and nature of a stallion and a horse—a difference which is due evidently to a lack of the internal secretion of the testes.

The results of the faulty secretion of various ductless glands are seen frequently in practice. Some are most peculiar and interesting. A type of case which is comparatively common is known as *pubertas praecox*—a condition in which a child matures with great rapidity. A rather remarkable case reported by Sacchi is well worth citing. The patient was a boy who was apparently normal until the age of 5½ years, when he began to grow rapidly and take on adult characteristics. His voice deepened, hair appeared on the pubis and face, and at the age of 9½ years he was about 5 feet tall, had a long black beard, long hairs on the chest, legs and pubis, and a mind too mature for his age. A large tumor (alveolar carcinoma) of the left testicle was found and removed at this time. Following this, pubertic symptoms gradually disappeared and he soon became both physically and mentally like other boys of his age.

A condition equally remarkable and also relatively common is that in which heterosexual characteristics develop during life. A striking illustration of this is a case reported by Friedrich-Grawitz in a girl who was apparently normal until the age of 20, when she gradually developed masculine characteristics. Menstruation, which had previously been regular, ceased; the breasts, which were previously well developed, became soft; adipose tissue characteristic of the female diminished; the voice deepened; coarse hairs appeared over the body, and the patient developed a moustache and heavy dark whiskers. Three years later an ovarian cyst was discovered. She was operated on, but died shortly afterward of peritonitis. This case and the previous one seem definitely a result of primary disgenitalism.

The glands of internal secretion functionate in carefully balanced harmony, and disorder in one is usually followed by disorder in others. The result is often a complex syndrome which can be attributed to a faulty activity of several glands. For example, either hypo- or hyperpituitarism is usually associated with testicular atrophy. Consequently a disgenital syndrome is usually superimposed on the pituitary. In a clinical case it is sometimes difficult to discover which gland is primarily at fault. Even the thymus, so long considered inert, appears to have an influence in young animals both on

the bodily development and on other glands of internal secretion. In young animals of some species its removal is associated with loss of lime salts from the bones, imperfect power of healing fractures and broadening of the epiphyses—a condition in some respects analogous to rickets. In addition to this, there follows a premature development of the testicles. This, in turn, has its effect on growth and development, the appearance of secondary sexual characteristics, etc. This example is mentioned simply to show the complexity of the inter-relationship of the organs of internal secretion. Hyperactivity of some glands (the pituitary for example) are followed by hypertrophy of others (the thyroid for instance) and atrophy of others (for example, the testes), and all may have their effect on development and health. It appears that in some respects a man is not entirely what he makes himself, but rather more or less what his organs of internal secretion make him.

The subject is rendered still more complex by the fact that there occasionally develops in the same individual symptoms which point both to hypo- and hyperactivity of an organ. For example, cases of acromegaly (hyperpituitarism) may also present signs of deficient pituitary secretion; cases of exophthalmic goiter (hyperthyroidism) may show signs of myxedema (hypothyroidism), etc. It seems probable that each gland elaborates several hormones and that all are often, but not always, either increased or decreased by a given pathologic process. Occasionally, some may be increased while others are reduced.

It is also possible for a disorder of the internal secretions to change completely in character, sometimes very rapidly. For example, a case of exophthalmic goiter may change to one of myxedema in less than a year's time.

As previously stated, I do not wish to discuss at length extreme types of cases such as those above cited. The examples are mentioned simply for the purpose of illustrating the profound influence of the ductless glands on the body and to prepare one's mind to believe in the results which seem to be an effect of a slighter but more generalized disorder as is seen it appears in the so-called status hypoplasticus. In the examples previously mentioned, the stigmata are gross. In status hypoplasticus the stigmata are usually slight, but they point just as clearly to the internal secretions as the causative factors. The condition gives a very varied picture. Some cases present a great display of stigmata, others only a few. The variation appears to be dependent on the severity and extent of the disease and also to a considerable degree on the glands which are chiefly involved. The diagnosis of status

hypoplasticus is not made on any one given sign, but on the finding of numerous lymphatic or hypoplastic stigmata. A number of these have been mentioned in the writings of Paltauf, Kolisko, Neusser and Bartel, etc., on status lymphaticus and status hypoplasticus. The most striking are:

Enlargement of the lymph-nodes, tonsils, follicles at the base of the tongue, pharynx, intestine and spleen. The distribution of the enlargement may be general or local. It is found in the throat and at the base of the tongue in about 80 per cent. of all cases.

Enlargement of the thymus.

The presence of infantile sexual characteristics, such as long arms and legs; large hands and feet (apparently a sequel of late ossification of the epiphyses); poorly developed genitals and secondary sexual characteristics; infantile distribution of hair on head, body and pubis; infantile distribution of fat; obesity of an infantile type (very general distribution); infantile larynx; high-pitched voice; enlarged infantile type of pelvis; late beginning and early cessation of menstruation; amenorrhea; sterility, etc.

The presence of heterologous sexual characteristics. In males, such as a tendency toward the female configuration of body; short arms and legs; small hands and feet; female distribution of hair on head, body and pubis (in males the pubic hair usually reaches as high as the umbilicus, in females the distribution is V-shaped and rarely rises much above the mons veneris); female distribution of fat; obesity of the female type (that is, with especially large accumulations about the breasts, buttocks and thighs); delicate skin; delicate bone structure; broad pelvis; small larynx; high-pitched voice; small genitals. In females, the opposite characteristics, such as a tendency to the male configuration of body; long extremities; large hands and feet; thick bones; male type of pelvis; male distribution of fat and hair; large larynx; low-pitched voice; small breasts; poorly developed genitals; abnormalities of menstruation, pregnancy, etc.

The signs of disgenitalism above mentioned are at present better known and more easily recognized than the other stigmata which shall be mentioned. Laymen as well as physicians have for centuries observed them in humans and animals, and have correctly interpreted them as signs of dissexualism. The results of other glandular defects are also commonly observed in hypoplastic individuals. To mention all of the manifestations which we might deem theoretically possible would be to catalogue the symptomatology of all the disorders of the ductless glands, some of which effect growth and development (for example, the thyroid, pituitary, testes, etc.), others metabolism (for

example, the thyroid, pancreas, pituitary, etc.), others mental activity, the thyroid for example, and still others (such as the adrenals) which have an influence on muscular strength, etc.

Defects which have commonly been found in lymphatic and hypoplastic individuals are as follows: Peculiarities of skeletal development in more or less marked degree, such as dwarfism, gigantism, acromegaly, bone deformities, skull anomalies, rickets, osteitis deformans, etc. Developmental anomalies of the circulatory system, such as congenital heart lesions, hypoplastic heart, patent foramen ovale, congenital mitral stenosis, hypoplastic aorta and blood-vessels. Anomalies of the urogenital system, such as bicornate uterus, hemaphroditism, hypospadeous, crypt orchism, ectopy of the bladder, hernia. Miscellaneous anomalies, such as a long appendix, abnormal lobing of the lungs, liver, kidneys, etc.; brain hypertrophy, chronic internal hydrocephalus, hypoplastic thyroid, colloid degeneration of the thyroid, etc. This list is by no means complete, and the future promises to add much to it.

The relationship between the hypoplastic arterial system and status hypoplasticus is of particular interest. The heart is often very small and thin-walled. The aorta is often short with a narrow lumen, and is frequently so thin-walled as to contract to half its length when removed from the body. The vascular hypoplasia is by no means confined to the aorta, but is found also in the peripheral vessels and has been observed even in the vessels of the lymph glands. This finding has been so common and striking in status lymphaticus and status hypoplasticus that it has been considered a possible etiologic factor by some observers. Some authorities believe that the poor vascular supply to the organs and lymph glands leads to a lowered vitality of the cells and that this could be responsible, in part at least, for their tendency to early atrophy and replacement with connective tissue.

The place occupied by the combined picture of status lymphaticus and status hypoplasticus in general medicine is an important one. First of all we find that over half of the individuals so constituted die before manhood is reached. The highest mortality is from the acute infectious diseases, and is found to amount to about 50 per cent. of hypoplastic patients who succumb before the age of 21. In an analysis of 536 autopsies, Bartel found that 72 per cent. of all the children whose death was due to acute infectious disease had a highly developed lymphatic system, and that over one-half the total number of all females autopsied before the age of 10 had hypoplastic genitals. In harmony with this, Karyl reports that over one-half of his autopsies on males below ten had hypoplastic genitals.

These statistics are of unusual interest and are worthy of thoughtful consideration. They remind us again that the habitus or constitution of an individual has more than a trivial influence on his expectancy and susceptibility to disease. They are important also from a standpoint of heredity, for, as Bartel has mentioned, over one-half of the less fit in the respect above mentioned are removed from the ranks of the living before their species can be renewed in any noticeable degree. The high susceptibility to acute infectious disease so apparent in lymphatic children diminishes after puberty is reached and in mature age seems to develop into an immunity greater than that possessed by normal people.

Equally as interesting as the susceptibility of lymphatic and hypoplastic individuals to acute infectious disease is an immunity which they enjoy against chronic proliferative diseases such as tuberculosis. Whereas tuberculosis of the acute inflammatory type is relatively common and runs a rapidly fatal course in them, chronic lung and intestinal tuberculosis (the common form in non-lymphatic individuals) is rare.

It is also interesting to note that atheroma is found with unusual frequency in this condition, especially among younger individuals. The majority of young persons with a severe grade of arteriosclerosis not due to some definite cause (such as lead-poisoning) present usually a number of hypoplastic stigmata. One need not look far for the apparent cause of this. The thin-wall hypoplastic blood-vessels so commonly found in hypoplastic individuals could hardly be expected to stand the strain of life as well as those of normal people. It may be added further that in them arteriosclerosis is especially to be regretted, for, oftentimes the heart also is hypoplastic, and gives way more quickly under strain than the normal.

The fact that cirrhotic changes have been found with increased frequency among the hypoplastic is also of interest. Such processes giving rise to Addison's disease, diabetes, nephritis, disorders of the pituitary and thyroid glands and poliserositis of non-tuberculous origin, although uncommon conditions, of course, are found in relatively greater numbers, especially among younger people. It has been suggested that inadequate vascularity plays a part in the causation of this, and also that an inherited weakness or an early acquired injury to the parenchymatous elements of the body might render some of them incapable of standing the strain of life and hence lead to their early atrophy and replacement with fibrous tissue. To illustrate, it is well known that some of the intoxications, chronic infections, etc., may be without apparent deleterious effect or may be followed by cirrhosis of some organ. For example, the continued use of alcohol may

or may not be followed by cirrhosis of the liver. It is possible that hypoplasia of the liver, a hypoplastic hepatic artery or something of the kind is a deciding factor in some cases.

The most sensational suggestions made in this connection have been those regarding a possible relationship between status lymphaticus and sudden and apparently causeless death, and also between it and suicides and crime. Almost every physician has been shocked once or several times by having a patient come to a sudden and untimely end without apparent cause and found at autopsy nothing more than hyperplastic lymphatic glands and follicles. Cases have been known of death following slight operations, such as a tonsillectomy, after an injection of serum, or from causes even more trivial than these. One case, mentioned by Bartel, suddenly died during an attack of vomiting while at the dinner table. A case observed by the writer in the Massachusetts General Hospital died a few moments after being placed in a sweat bath. No cause of death was found at autopsy except status lymphaticus. The frequency with which status lymphaticus is found among suicides has been mentioned by Brosch who made a study of over two hundred cases of suicide. It has also been noted that autopsies in penitentiaries show status lymphaticus with relative frequency. Among one hundred cases of status lymphaticus reported by Bartel, one died suddenly without cause, four under anesthesia and six committed suicide. Statistical studies on this subject are not yet complete and these interesting questions are still up for further study.

One other practical question must be considered before closing. This concerns a possible relationship between status hypoplasticus and neurasthenia. By neurasthenia I do not refer to the scrap-basket which includes all patients with absurd and apparently groundless complaints, but to a type of patient which we all see quite frequently. Individuals who become exhausted very easily, have headaches following a very trifling amount of mental or physical exertion or eye-strain, and who present no apparent fault in habit nor physique to account for their weakness. Such patients frequently present a display of hypoplastic stigmata and sometimes improve rapidly under glandular therapy.

1130 Rialto Building.

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DISCUSSION

DR. E. A. BURKHARDT, Kansas City: This is a wonderfully fertile field for investigation that the doctor has presented us with. I have been reading considerably on this subject, that is, the literature on the relationship of internal secretions to bodily functions. I find that there are several ways of presenting a theory. There are two principal ways, and one of them is the inductive way and the other the deductive way. We are likely to get rather enthusiastic over a subject before it is thoroughly investigated. Now, as I said before, I believe this is a very fertile field for investigation, and yet when we take the deductive method, when we get a number of facts together and then try a conclusion, that is different from starting out with a conclusion and then making facts harmonize with the theory. The experiments that have been carried on, as I understand, in some of the universities would go to show that if you remove certain glands in an animal the animal will take on certain characteristics that the absence of those glands, or of that gland, is supposed to create; on the other hand, if extracts of that gland are introduced into the animal, producing a hypersecretion or the results of hypersecretion, it will produce other results that are supposed to take place when we have hypersecretion of these glands. But the peculiar thing about it is that it does not do it always, and we are prone—and I would offer this as the burden of my remarks—we are prone to take the exceptional case, or the case which might just happen to be so, and prove our theory by it. Now, when I say that I do not mean to say that I differ from the essayist. This is just a word of warning that in our investigations of these matters we should get at the facts. I was rather struck by the statement of one of these investigators, one who read a paper before one of our societies at Kansas City, that what we do not know about these glands is considerably more than what we do know about them.

DR. G. WILSE ROBINSON, Kansas City: To my way of thinking, Dr. Duke has presented to us a most important subject. I do not believe there is any subject in the field of medicine to-day of greater importance than that of the study of the internal secretions and their relations to medicine. I believe we know less, perhaps, clinically of these two departments of medicine than of any others, but I do not agree with the statement of some that we do not know anything, because we do. There has been a great deal of investigation, a great deal of investigation has been done extending over a period of years, concerning the relation of these secretions to certain diseases and the relation of these secretions to the sympathetic nervous system. We do know this—and you have all observed it—that in hyperactivity of the thyroid

gland we get certain symptoms, we get certain evidences of a hypertonus of the sympathetic nervous system, a condition of hypersympathicotonus, we get a dilated pupil, a rapid heart, also evidences of irritation of the central nervous system, we have a restless patient, a patient that is readily fatigued; all of these conditions indicating a condition of weakness and hyperirritability of the nervous system and especially of the sympathetic nervous system. The sympathetic nervous system may also be affected in a contrary way; a hypo-activity of the thyroids will give us also a hypotonia of the sympathetic nervous system.

DR. J. G. SHELDON, Kansas City: From the practical side of this subject I believe we will admit the importance of the thyroid gland. We know the thyroid gland has a certain effect on the system, but I do not know that we can say very much about it. We have all heard about status lymphaticus and I think most of us know about hypoplasticus. One man can explain these things from the standpoint of the nervous system if he happens to be a specialist on nervous diseases; another man can explain them by toxins and bacterial infections of the system; another may look upon them as congenital and hereditary. The doctor speaks about hypoplasia. That is very common. We have known for years that deformities of the aorta have been observed in perfectly healthy individuals who have gone to adult life and to middle age.

There were no symptoms complained of in about 16 of 129 of these patients reported by Barie, Pic, Bonnemour and Bubreuil, so there is probably something more than a hypoplastic aorta associated with this.

His observation with reference to the death of children with status lymphaticus in acute infectious diseases means nothing. It is a part of the pathology of the acute infectious diseases to have a lymphatic reaction, so I do not think it means anything to find a lymphatic reaction in infectious diseases, or that children should die of infectious diseases with this status lymphaticus. Because a man has a hernia we cannot say that he is congenitally defective nor blame it on the secretions because a large number of children have cleft palates; and yet they are strong enough to withstand all the diseases and accidents of life. You may take any proposition of internal secretions that you want to in the whole field of medicine and prove it, and you can find absolute proof for the opposite contention. Take the thymus gland, which is one that has been studied very thoroughly, and there is no agreement as to whether the gland is one of internal secretion or not. For instance, Warthim, who has given this a considerable amount of study and who is not only an experimental pathologist but a doctor, says he thinks there is no internal secretion from the gland and that we should disregard the idea of internal secretion of the thymus; yet we find authorities on the other side saying that it has a very powerful internal secretion.

DR. DUKE, closing: In answer to the discussion of Dr. Burkhardt, I would say that what I have tried to bring out in my paper is, first of all, that the glands of internal secretion have a profound influence on the body and that any interference with their normal functional activity is followed by a very definite result. Certainly this fact is beyond dispute. Next, that in a number of hypoplastic cases there has been demonstrated a tendency to fibrosis of some of the organs of internal secretion and also that the clinical symptomatology often points to a disorder of these organs. Finally, that statistics show status hypoplasticus to be a comparatively common condition and that it has the several important relationships to general medicine which were mentioned. This reasoning, whether inductive or deductive, appears perfectly logical to me, and while there is yet much

to be learned regarding the organs of internal secretion, surely no one doubts the truthfulness of certain bits of well authenticated knowledge which we now possess. For example, the relationship of the thyroid to cretinism and myxedema, the relationship of the genital organs to the development of sexual characteristics, the relationship of the pituitary to a certain type of infantilism, acromegaly and gigantism; the relationship of the hypoplastic habitus to longevity, bacterial immunity, etc.

The criticism has been offered that some may claim the disorders mentioned in my paper are the result of a defective nervous system, others that it is intoxication, etc. With this, I can heartily agree, but in addition I beg to state that all might be in harmony instead of at variance. The glands of internal secretion, like practically all other organs, are under the influence of the nervous system and certain nervous disorders undoubtedly modify their functional activity. If the ductless glands are like other organs in the human body they can also be injured by intoxications of various sorts. Unquestionably, the action of the organs of internal secretion can be disturbed by surgical conditions. For example, pelvic inflammatory disease may partially or wholly destroy the ovaries and bring about a syndrome of symptoms due to a failure of their functional activity. All this may be true and yet leave room for the constitutional weakness above described. This variance of opinion is in reality no variance at all. The objection to the assumption that a hypoplastic aorta is a cause of ill-health likewise could be offered against almost any fact with which we are familiar in medicine. It is certainly true that a hypoplastic aorta can exist in people who live to a ripe old age. We have all observed things even more remarkable than this. I have seen a patient who died at 70 with a stenosis of the aortic valve which caused a constriction that would admit only the tip of the small finger. This woman had lived to the age of three score and ten, and the history of the case and the appearance of the valve indicated that it had been in its deformed condition for the greater part of her life. The stenosis, severe as it was, was not incompatible with long life in this particular instance. First of all the patient was a woman, very small and thin, a dressmaker by occupation, who led a very sedentary life and had had no severe illnesses. Likewise, a hypoplastic aorta might be compatible with a long and healthy life provided the organ was not put to too severe a test. The remarks concerning the discordance of opinion regarding the thymus gland could also be made against almost any new knowledge we have, especially knowledge concerning organs the existence of which is not of fundamental importance.

TREATMENT IN HEART DISEASE*

CHARLES H. NEILSON, M.D.
ST. LOUIS

The scientific treatment of disease rests primarily on a correct diagnosis, together with a thorough knowledge of the physiology, chemistry and pathology of disease. Each physician, as a rule, has his own scheme for treating diseases of the heart. This comes about perhaps because the physiology of the heart is as yet not completely understood, and without a clear

conception of this physiology no rational therapy can be established. The hazy knowledge of the physiology of the heart in the minds of many physicians, the unreliability of the preparation of some of the drugs used in treating the heart and fixed schemes of treatment have resulted in a varied cardiac therapy.

Disease of the heart is one of the oldest and best studied chapters in medicine. It would seem, then, that disease of the heart should be well understood, but I am convinced that in cardiac therapy we are far from having reached a rational procedure. The heart is a delicately adjusted organ which is easily disturbed by disease in itself, is easily disturbed reflexly by disease elsewhere in the body, and is easily disturbed by improper and vicious medication.

It is often more difficult to arrive at a correct interpretation of many heart conditions than of most other diseases. This is particularly true in disease of the myocardium; in the interpretation of cardiac arrhythmias and in hearts where there are several valvular lesions. A correct diagnosis of these conditions, particularly in the last-named condition, is not so important as the study and knowledge of the effect of these conditions on the work of the heart.

Valvular lesions are the most common of heart diseases which we are called on to treat. By many of us the treatment of valvular lesions is usually the same, irrespective of the etiology. It is impossible in this paper to discuss all the diseased conditions of the heart. I will confine this discussion to those conditions which we most commonly are called on to treat. These may be classified as follows: 1. Cardiac insufficiency resulting from rheumatism. 2. Cardiac insufficiency from sclerotic changes in the valves, coronary arteries and myocardium. 3. Insufficiency from nephritis. 4. Functional disturbances of the heart. 5. Partial and complete heart block.

In studying a case of valvular trouble we should consider the history carefully, for here, as in most diseases, the basis of the treatment lies. As soon as a valvular lesion or blow is discovered many physicians consider rheumatism the etiologic factor and treat accordingly. Perhaps most of our valve lesions are rheumatic in origin, but by no means all of them, and the latter require a different treatment. On the contrary, many rheumatic hearts are overlooked because of lax history taking.

We should remember that rheumatism as a rule produces its damage by changes in the edge and body of the valve and not the base of the valve. This pathologic change leaves the base of the valve and the mouths of the nutrient or coronary arteries free, and hence there is no change in the myocardium except that which comes from overwork. Digitalis exerts its effect on the heart muscle only. We have in the rheu-

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matic heart an ideal condition for the use of digitalis, and it is in this condition that we get the best results by digitalis, irrespective of the valve involved, not because the myocardium is diseased, but because it is overworked.

Insufficiency from sclerotic changes have a different location of the pathologic changes and consequently a different physiology. These sclerotic changes have a predilection for the body and base of the valve together with the coronary arteries. The favorite seat of such changes is the semilunar valves and the structures of the aortic ring and the coronary arteries which take their origin in this region. In this type of valvular lesion we have, in addition to the change in the valves, a disturbance in the nutrition of the heart muscle and therefore a diseased myocardium. Here, too, we often find cardiac arrhythmias and heart blocks. Rheumatic hearts are not so often accompanied by arrhythmias except in broken compensation and in stenotic lesions. In the sclerotic hearts the common therapeutics is digitalis. Sometimes digitalis gives results by tuning up the heart muscle, but the results are not so striking as in rheumatic hearts, and should not be long continued. The treatment in these cases should be along the lines for the treatment of generalized arteriosclerosis. If there is a syphilitic history, brilliant results are often produced by antiluetic treatment. I well remember a post-mortem which was diagnosed rheumatic endocarditis. The findings were roughening and sclerotic changes in the base of the semilunar valves and the mouth of one of the coronary arteries was practically closed by a syphilitic process. I believe that in this case brisk antiluetic treatment would have produced good results. The many causes of arteriosclerosis should be considered in treating these cases. Digitalis may be useful, but is not the basic remedy as in rheumatic hearts.

Insufficiency from nephritis is frequently incorrectly diagnosed and treated. This type of heart disease is in the well-known cardio-nephritic cases. These cases come under the observation of the physician with an apparent valvular lesion, often with an arrhythmia and hypertension. The physician hears a murmur and too often no further study is made of the case. He considers the case an ordinary rheumatic heart and cardiac tonics, especially digitalis, are used. Fortunately, some of these cases with passive congestion and edema do well on such treatment, because there is no real disease of the valve, only a relative insufficiency due to a dilating, overworked heart muscle. The heart trouble in these cases is due to a nephritis which precedes or perhaps follows general sclerotic changes. This fact should be realized by the physician, and his attention should not be centered on the heart alone, but also on the nephritic condition of the patient. Measures

should be adopted which aid in combatting the hypertension and the nephritis.

These three classes of cases include the majority of the serious cardiac insufficiency from pure valvular lesions in Class 1; insufficiency from valve and coronary sclerosis in Class 2; insufficiency from chronic myocarditis in Class 2; insufficiency from syphilitic processes in Class 2; insufficiency from nephritis in Class 3.

We thus have left insufficiency from chronic pulmonary conditions which dam the blood back into the heart, producing an overworked heart muscle, insufficiency from fatty changes in the heart, and from general malnutrition, and cachexia.

Digitalis is the sheet anchor in all cardiac insufficiencies. A good reliable preparation when properly used will give results. These results are most marked in pure valvular lesions. The results in the insufficiency due to a dilating heart in nephritis are next best. The other classes of insufficiency are benefited by digitalis in most cases.

Digitalis preparation, such as the tincture, infusion, leaves, and the preparations, such as digitelein, digalen and digipuratum, differ materially in the rapidity of their action. A physician should know thoroughly the use of at least one reliable preparation. Digitalis should be used in large doses and pushed to the physiologic limit and then stopped for a time or given in much smaller doses for a time, followed again by large doses. The time should come and will come, I believe, when all digitalis will be prepared so that it can be used by the hypodermic needle.

In some cases long-continued use of digitalis is necessary. In some ways digitalis is a dangerous drug and the physician who is prescribing it should not let his patients shift for themselves while they are taking it.

We must not forget that other aids to treatment must be used in many of these cases. Other cardiac tonics, such as strophanthus, the caffein group, strychnin, etc., are to be used as the conditions arise.

In treating these cases we should first and always try the effect of rest on such crippled hearts. Exercise, venesection, diet, hygienic measures, etc., should not be forgotten in our zeal for the use of digitalis.

A troublesome disturbance of the heart, the so-called functional disease of the heart, often causes much anxiety, both to the patient and the physician. The patient fears for health and even for life in many of these functional disturbances. These disturbances include the toxic neuroses from alcohol, tobacco and excessive coffee and tea. They also include reflex neuroses from the respiratory organs, and especially from gastro-intestinal derangement. They include the so-called nervous heart. These disturbances manifest themselves by palpitation of the heart,

extrasystoles, varied arhythmias and pains in and about the heart. Neuroses of the heart, like hysteria and neurasthenia, are diagnosed too frequently. Some physicians diagnose a cardiac neurosis when a little study and thought would show an organic disease. Some of these neuroses are difficult to distinguish clearly from organic disease except by modern methods of investigation, and even then it is often impossible. Our best way of considering these cases is to consider all cardiac disease organic until proved otherwise. Intermittent hearts, extrasystoles, arhythmias, etc., are frequently the precursors of more serious heart disease.

The treatment of functional heart disease rests on the cause of the trouble, if that can be determined.

Toxic causes, such as alcohol, tobacco, coffee and tea and eating, are frequently cured by removal of the cause. Frequently the damage is too severe and removal of these toxic causes merely gives relief. Removal of these causes and rest are the main factors in the treatment.

In functional disease from reflex origin, I wish to call especial attention to the stomach as a cause of many of these cases, perhaps a majority of all functional troubles. Hyperacidity, ptosis, hyperesthesia of gastric mucosa and especially gaseous distention of the stomach and intestines, are frequent causes of or accompanied by heart trouble. Treat the stomach in these cases and the heart will generally take care of itself.

The so-called nervous or irritable heart is part of a symptom-complex of the neurotic. We may give a course of treatment based on hygiene, diet, drugs, rest, psychotherapy, etc., and think we have cured our patient, when the trouble breaks out anew and we start over again. The Eppinger and Hess theory of vagotonia helps in some small degree in these cases, but I feel we are still in the dark. The only advice in the way of treatment I can offer is that we study our neurotic cases more thoroughly, more intensively, for some cause of the neurosis. I feel sure we will find that many of the cases which we have labeled neurotics with functional heart disease will have some disease which will clear up the whole situation.

The treatment of the Stokes-Adams syndrome is difficult and uncertain. In cases with a syphilitic history and manifestations, antiluetic treatment has frequently given good results.

The partial or incomplete heart blocks are also difficult to cure. In some of these cases atropin relieves the block and some good is accomplished. In the general treatment of heart disease, if we would get the best results, we must know more of the physiology of the heart, more of the pharmacology of the drug used and more of the etiology of the disease.

Humboldt Building.

THE ROENTGEN METHOD IN ILEOCECAL DIAGNOSIS*

E. H. SKINNER, M.D.
KANSAS CITY, MO.

It is becoming generally conceded that by the Roentgen method we are able to make a diagnostic map of the abdominal viscera which will present valuable information for outlining the medical or surgical campaign necessary to relieve the patient.

The clinical history, laboratory tests and Roentgen evidence cannot be separated; their combination tends to exactness in diagnosis and prognosis.

We believe that the Roentgen survey is as important to the successful treatment—medical or surgical—of obscure abdominal lesions as is the geographical map to the general of a military campaign. The general of an army depends on his aids for the information necessary to plan an attack; just so the surgeon, who may have courage, skill and dexterity, but his surgical judgment is increased by the wealth of diagnostic facts which are now within reach.

One year ago I had the pleasure of discussing the Roentgen evidence in the functional types of constipation. My theme to-day is the anatomic pathology of the ileum, cecum and appendix. While there may be roentgenologists who are ritualistic in their adherence to fluoroscopy or radiography in gastroduodenal pathology, there seems to be little doubt but that horizontal fluoroscopy is an essential in ileocecal roentgenology. The use of the radiograph, controlled by fluoroscopic palpation, adds greatly to the careful study of each case, but the physician who attempts to survey the right iliac region without fluoroscopic palpation on a horizontal Roentgen table will miss much information of value. Especially is this true in estimating adhesions to the visualized cecum, ascending colon and terminal ileum.

The ability to recognize the bismuth-filled appendix obtains in a rather high percentage of the cases examined. The significance of such bismuth fillings has not been finally established. We may rightfully argue that the retention of bismuth in an appendix for a period after the cecum is entirely free from opaque shadows suggests the potential possibilities for danger in such an appendix. If bismuth masses are retained over a varying period may not infected residues be retained which could light up trouble when the individual is constipated? On the other hand, there are cases where the appendix refuses to fill at all, and there is definite Roentgen evidence and clinical symptomatology of

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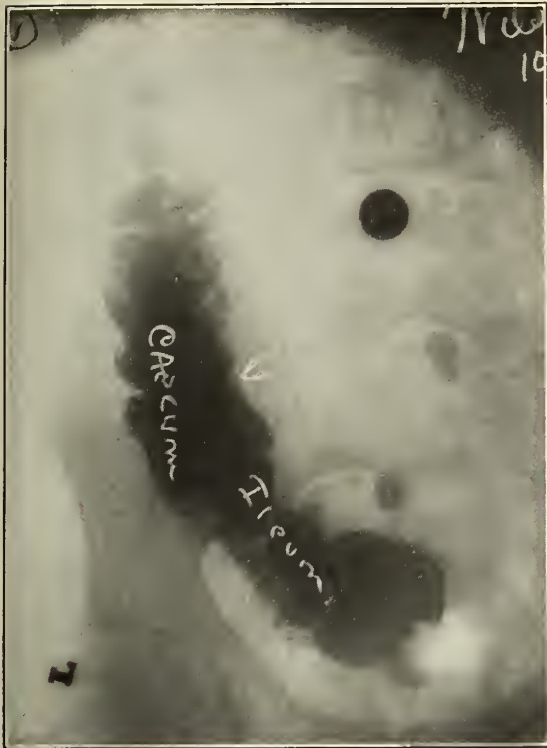


Fig. 1.—Ileal stasis. Note the sixteen-hour bismuth residue in the terminal coils of the ileum. Arrow indicates ileocecal valve. This man had an inguinal hernia. He has overcome his constipation and gained 20 pounds on paraffin oil and dietetic attention.



Fig. 3.—Mrs. D., aged 35. Chronic constipation and excessive flatulency. Bismuth enema shows large mobile cecum and patent ileocecal valve. Arrow points to bismuth enema shown in the ileum.



Fig. 2.—Mrs. R., aged 48. Chronic constipation twenty years. Ileal stasis with kinks showing nineteen hours after opaque meal. Arrow (1) indicates kinks in ileum; arrow (2), ileocecal valve. Ptosis of transverse colon. Operative proof.



Fig. 4.—Mrs. D. Mass shadow in right iliac fossa at twenty-four-hour interval which is difficult to interpret from radiograph. See No. 5.

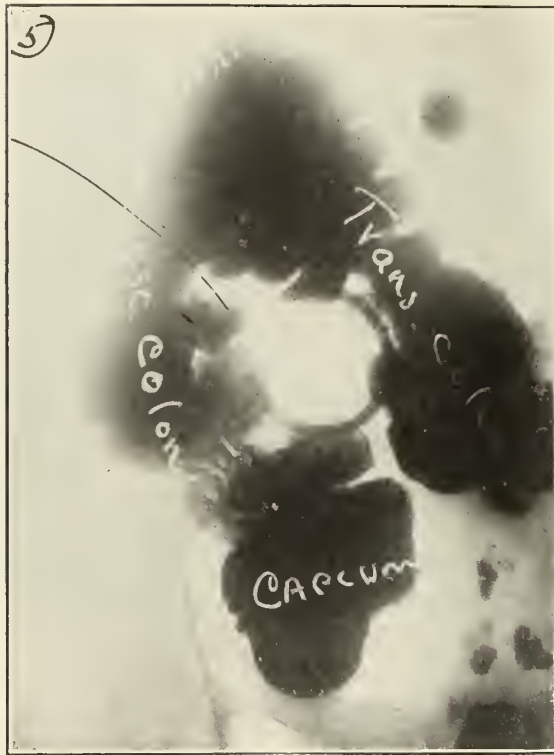


Fig. 5.—Same case as No. 4. Showing the identification of the right iliac mass by fluoroscopic palpation.



Fig. 7.—Miss K. Twenty-four hours after bismuth meal. Scattered cecal shadows with appendix visualized. Arrow (1) indicates kinking or constriction of appendix lumen. See No. 8.

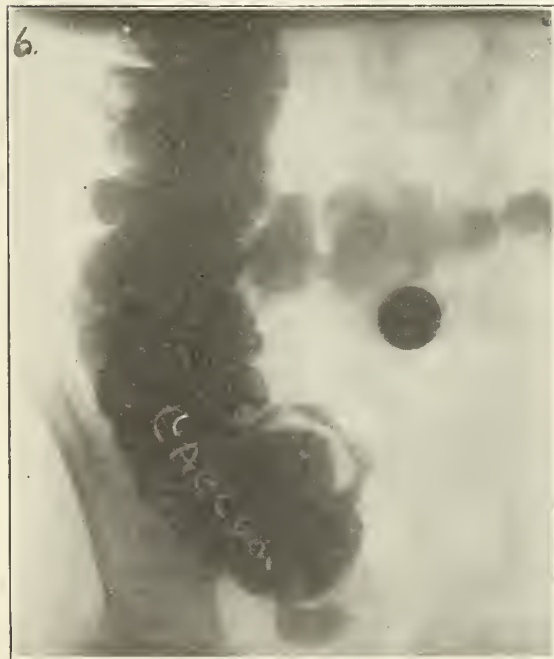


Fig. 6.—Stasis in proximal colon with long appendix visualized by bismuth filling. The appendix shadow shows no kinking or uneven filling and there was no tenderness under fluoroscopic palpation.



Fig. 8.—Same case as No. 7. Twenty-four hours later, showing bismuth residue in appendix distal to the constriction indicated in No. 7. This case presented obscure stomach symptoms with appendiceal tenderness. The bismuth filling of the stomach and duodenum was quite normal.

cecal or ileal adhesions, in which case the appendix is so bound down by adhesions that a filling is impossible. When the appendix area is painful or tender to Roentgen palpation, without opaque shadows in the appendix, but with indefinite dyspeptic symptoms and chronic constipation of ascending colon type, we may reasonably infer an appendix obliterated or bound down by adhesions, if we have established the normality of the stomach, gall-bladder and duodenum. It may be difficult to say absolutely that this or that appendix is pathologic, but the mere retention of opaque shadows establishes the potential danger of retention of infectious fecal matter when the individual is constipated.

The shadows of the appendix may show that it is kinked, abnormally long or twisted about

residue. Through the accidental requirements of our laboratory hours for examining bismuth cases we have come to place some reliance on sixteen- to nineteen-hour ileal residues as an indication of a stasis dependent on constrictions of the terminal ileum or a patent ileocecal valve, or both. It seems that there is a growing importance to a patency of the ileocecal valve. This complication has been discovered in a percentage of cases which would formerly have been classed as Lane's kinks. It is also found with large atonic cecums without ileal adhesions. Ileocecal patency occurring from these two sources may possibly be explained as follows:



Fig. 9.—Dr. R., aged 42. Stomach symptoms over period of seven years of indefinite character. Bismuth meals indicated normal stomach and duodenum, but the nineteen-hour interval showed this ileal stasis with arrows (2), (3), (4) and (5) indicating possible kinks or constrictions and arrow (1) a possible pericolic band over cecum. No appendix shadow visible. Operative proof. Appendix retrocecal.



Fig. 10.—Mrs. C. Indefinite but severe stomach symptoms over period of years. Bismuth examination was interpreted as possible duodenal adhesions and kinked appendix. See arrows pointing to irregularly filled appendix. Under fluoroscopic palpation the appendix was tender and immovable, but the cecum was slightly movable. Operation showed no duodenal adhesions, but proved the appendix findings.

the terminal ileum. It may be seen acting as a suspensory ligament of a large ptosed cecum. It may be difficult to visualize the appendix which is imbedded in adhesions behind the bismuth-filled cecum, especially if the cecum and terminal ileum are immovable from adhesions. Possibly the appendix does not accept bismuth so readily in this situation or is obliterated.

The question of ileal stasis is interesting. Some claim that a bismuth residue in the ileum nine hours after an opaque meal is sufficient evidence. Others require a twenty-four-hour

When there are ileal adhesions the overloaded cecum may pull the pucker out of the normally invaginated ileocecal valve, and with an atonic cecum the pucker could be lost through the slack atonic muscle fibers at the ileocecal junction. The Roentgen findings in these two conditions permit a differentiation.

First, where there are ileal adhesions, definite filling defects in the terminal ileum are visualized on the fluorescent screen and are readily determined twelve to twenty-four hours after the bismuth meal; the terminal ileum is fixed

with possibly some dilatation proximal to the adhesions; the terminal ileum rarely distends to its normal lumen or exhibits its normal outline.

Second, where the condition is one of atonicity of the dilated cecum without ileal adhesions, the use of a bismuth enema is better. The entire colon is filled with a large opaque enema and as the cecum distends we see the opaque enema emerge into the dilated terminal ileum which appears to have miniature closely set haustral outlines without any filling defects from constricting adhesions.

It has been shown that 63 per cent. of sixty cases showing patent ileocecal valve also suffered from chronic appendicitis (Kellogg), in 32 per cent. of which the appendix was visible by the Roentgen method.

It is generally conceded that pericolicitis dextra (Jackson's membrane) is a distinct mechanical lesion with a definite clinical symptom-complex. Therefore it should also possess a definite Roentgen symptom-complex.

Theoretically, the Roentgen symptom-complex of pericolicitis dextra (Jackson's membrane) should be:

1. Stomach may show slight ptosis, but absolute freedom from organic lesions.
2. Duodenum normal.
3. Stasis of the proximal colon as far as first portion of the transverse colon, which may persist for days.
4. Dilated cecum with possible appreciation of the appendix acting as a suspensory ligament.
5. Fixation of ascending colon with tenderness and pain referred thereto. Frequently there are one of two distinct annular constrictions near the flexure in the ascending colon.
6. Spasticity of descending colon with increased antiperistalsis of colon and mucous shadows indicating colitis.
7. If the condition is of long standing there may be ileocecal patency and general visceroposis with the exception of the hepatic flexure.
8. The one startling Roentgen finding is the constancy of the shadows in the proximal colon which remain almost identical for days and do not alter very perceptibly when patient is changed from the horizontal to the vertical position.

The preoperative Roentgen survey of the abdominal viscera is especially valuable where there are adhesions of a redundant sigmoid to the cecal structures or in other vicarious attachments. Again omental adhesions to the cecal region produce filling defects in the large bowel which become visualized by the Roentgen ray. The bismuth enema permits an admirable mapping of the colon position, filling defects, adhesions and constrictions.

Any mechanical disturbance lends itself immediately to Roentgen delineation where dif-

ferentiations of opacity are possible; to wit, bismuth meals. One may unconsciously misinterpret clinical symptoms alone, but the mechanical record of symptoms must support the clinical estimations or the one or the other is incomplete. It may be perfectly satisfactory to build up a symptom-complex purely subjective and objective, but if we are able to visualize the symptom-complex and record it mechanically, there can be a more exact preoperative diagnosis which will permit surgical measures to be estimated beforehand and thus save unnecessary surgery or prolonged anesthesia and shock.

1018-1022 Rialto Building.

AUTO-INTOXICATION AND ITS RELATION TO INTESTINAL INDIGESTION*

D. F. MANNING, M.D.
MARSHALL, MO.

It is true that medicine has as yet not attained the standard of an exact science, and that empiricism continues as our chief reliance in many instances.

Fortunately this is less true than it was half a century or even half a decade ago, and the progress of science, with the accumulating knowledge derived therefrom, is day by day bringing the accuracy of such statements into a constantly diminishing circle. But disease is a very complex state, and would it be less than a dream to hope that the day will ever come, short of the millennium, when it can be said that we know all that may be known concerning its nature, prevention or cure?

The subject I have chosen for this paper is one by no means fully understood, but one that has grown in importance in my mind as my experience has increased with the years, until I am now persuaded that it occupies a place in relation to the etiology of diseases second to none in the whole vocabulary of medicine, and is worthy of our most thoughtful consideration.

The writer is not unmindful, however, of a disposition in certain quarters to taboo the whole subject as being unscientific and to denounce the term "auto-intoxication" as unworthy of a place in the nomenclature of self-respecting physicians—in fact, that it is simply a cloak to hide our ignorance. But before such interdictio can carry conviction of error to the average mind it must offer something better in explanation.

By reason of its very complexity our knowledge of the subject is limited and our experiences not altogether uniform, yet it is not stat-

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

ing it too strongly, I am convinced, to say that in this condition we have the starting point of the majority of chronic diseases as well as the rendering of individuals susceptible to the invasion of many of the acute infections.

Self-poisoning is not an entity which can be classed strictly as a disease, but rather is a condition arising from the accumulation within the system of certain products of metabolism, or those of bacterial origin.

On the latter point the critics, strictly speaking, may have some ground for their strictures, as auto-intoxication implies, necessarily, that the substances producing it arise from within the body. The "subinfection" theory, however, as advanced by Professor Adami of Montreal simply stresses the bacterial origin of the disorder, but in no degree changes the clinical picture or modifies the therapeutic procedure of the autotoxic view.

Robert T. Morris states as his belief that the colon bacillus is responsible for the symptom-complex known in auto-intoxication and asserts that arteriosclerosis and other degenerative processes have their inception from this organism alone.

But that faulty metabolism is probably the primal cause seems to be sustained by a decided majority of authorities.

Whether the toxins absorbed are metabolic products of our own manufacture, as hitherto believed, or are those of bacterial origin, the result is not modified or rendered less harmful to the individual. But may not both be true and still no serious violence be done to scientific ideals?

The process of metabolism is of two kinds—constructive and destructive—and so long as the balance between the two is properly maintained, the body functions remain in a normal state. But an unbalancing of the relation between production and elimination must result, in some measure, in a departure from a perfect state of health.

This unbalancing may result, in some degree, from a variety of causes, but it is my belief that by far the greater number of cases have their genesis in a disturbance of the digestive function, particularly that of the intestine.

In the present state of our knowledge it is not possible to group all cases of auto-intoxication under a specific symptomatology. In fact, the manifestations must vary in accordance with the nature and amount of the predominant toxin.

But muscular soreness and a sense of fatigue out of all proportion to that resulting from usual physical or mental exertion, hebetude, headache and other disturbances of nervous function, more or less evidence of digestive disorder, and often irregularity or other functional derangement of the heart are phenomena com-

monly enumerated. And frequently the functions of the skin, kidneys and bowels are in some degree disturbed. But I do not believe that habitual constipation is a necessary or even usual accompaniment.

In my experience some of the most marked cases have been individuals who have daily free evacuation of the bowels.

Food, of course, is the source, and its principal elements—proteins, fats and carbohydrates—when ingested in proper proportions and assimilated regulate all of the vital functions and activities and maintain a state of physical and mental well-being.

But disturb digestion by over- or inappropriate supply, with the resultant imperfect oxidation and assimilation, and our sensitive organism feels the effect at once. There may be no immediate marked manifestation, and therein lies the danger, but continuance of the abnormal supply with habitual lack of proper appropriation, will most certainly result in functional and later in structural changes in some of the tissues or organs of the body; and thus we have the beginning of degenerative disease processes. Physiological chemistry has of late, with its increased and improved facilities, given to this subject vastly more study than formerly, and rays of light are beginning to penetrate and illuminate some hitherto dark corners in the history of clinical medicine.

But long ago it was demonstrated that various substances resulting from imperfect metabolism—purin or alloxur bases and their derivatives—possess decided toxic properties; and when their production exceeds in considerable amount their elimination the train of symptoms already detailed follow, and the intensity of their manifestation is in proportion to the degree of the resultant toxemia. Primarily, the formation of these substances is dependent on incomplete disintegration of the protein molecule incident to imperfections in the digestive processes. This view is not accepted by all chemists, but is adhered to by the best authorities.

But it is assumed that all will agree without argument that continuous irritation from any substance, regardless of its origin, will in time, if in sufficient quantity, effect changes in tissues and organs and modify their functions.

Nature has provided for our protection from noxious substances through the action of the digestive juices and ferments, probably some of the internal secretions, certain of the cells and their enzymes, the filtering and storage function of the lymph-glands and the liver, and numerous other agencies. But these are more effective safeguards against acute infections than in slow poisoning.

It is also well established that we act as host at all times to myriads of micro-organisms, but

that they are innocuous under normal conditions of our system and become pathogenic only when our natural resistance is in some way diminished.

Likewise all recognize the resistance of the system when invaded by antagonistic bodies, and that a certain degree of immunity results; but this resistance, of necessity, has its limit.

Much has been written on this subject, and we have the theory of phagocytosis as promulgated by Virchow and later given additional emphasis and clearness by Metchnikoff; the opsonic theory of Wright and Douglass; the chemical theory; Ehrlich's side-chain theory, and theories without end and antibodies, etc.; but people continue to grow old prematurely and develop insidious and incurable maladies just the same. Above and beyond it all stands this chronic state of disordered metabolism.

What is metabolism? In its most simple definition it is that process whereby the living cells appropriate materials obtained from the food and incorporate them into their own substance and change or prepare the protoplasm for specific uses.

Thus it is seen that we are dealing with the very essence of nutrition, and if the waste or end-products of the operation are in excess of Nature's provision for disposing of them, deleterious results must inevitably follow.

It is the continuous tap of the hammer that causes the granite to break into fragments and the constant dripping of water that wears away the stone.

Likewise here; but the question may arise as to why the result is not always the same. The answer may not fully explain, but here is a suggestion: your vulnerable point may be the kidney, and chronic nephritis is the result. Mine may be so small as to require the aid of the microscope to discover it, but sclerotic changes in the islands of Langerhans, resulting in failure of function in the pancreas, may cause diabetes. In another it is the heart, and endo- or myocardial changes come on. And so on down the line — arteriosclerosis, pernicious anemia, etc.

As for myself, I can see nothing incompatible in the view that a variety of conditions may arise from a common cause, and it is clear to me that we must revise our way of approach if we ever succeed in unraveling some of the knotty problems of medicine.

Many patent facts come to us through clinical experience and observation for which we can give no wholly satisfactory explanation; but to arrive at a working knowledge of this matter it is necessary that we come first to a realization of the truth that the fundamental etiologic factor in all such disorders is primarily nothing more or less than these retrograde processes in metabolism.

This brings us to the second part of the subject, which has been in some measure anticipated by what has already been said.

As previously indicated, it is my conviction that the chief causal factor is to be found in a failure of the digestive function of the bowel.

Gastric impairment, of course, is common; but the stomach serves mainly to prepare the food for later digestion in the intestine, and absorption and assimilation begin only after its contents pass the pylorus and the chyme comes into contact with the active digestive juices of the intestinal canal.

The process of intestinal digestion is somewhat complicated. Several different functions of the bowel enter into the act, disturbance of any one of which will in some measure derange all. It is only when the secretory, peristaltic, absorptive and excretory functions all act in harmonious relation that we can have perfect digestion and assimilation; and by careful inquiry we should experience no great difficulty in determining which function is at fault in a given case.

Digestion proper — the simple converting of food materials into a fluid state — is little more than a purely physicochemical process which may be very closely imitated in the test-tube. But in the living body there are factors and influences which may tend to retard or otherwise render the process defective which are never encountered in the laboratory — dietetic errors and imperfections in that great regulator, the nervous system, for instance. It behooves us, therefore, to take a comprehensive view of the whole problem, carefully assigning to each factor its true relative value.

And we should bear in mind that if the process is retarded beyond well-defined limits, extraneous substances come into play and putrefactive fermentation results, and the epithelium of the intestinal mucosa carries into the blood and chyle streams, not only imperfectly prepared elements of nutriment, but toxic substances occasioned by increased bacterial activity as well.

In perfect health, digestion in all of its stages is carried on unconsciously, but a departure from the normal standard is marked by indications of a fairly constant and clear type.

Habitual inability to digest certain articles; pain, or rather discomfort, in the upper abdomen some time after eating; flatulence, with a persistent sense of abdominal distention, are symptoms commonly present, and when coupled with the general manifestations already enumerated should lead us to a thorough examination and discriminating inquiry.

Almost our sole reliance is in the clinical manifestations, but patient and painstaking observation should afford sufficient light to guide us in a correct diagnosis. By no means

all have the laboratory equipment or probably the training necessary to make the chemical or microscopical examination of the feces of practical service. But the routine chemical examination of the urine is indispensable.

Abnormal intestinal putrefaction can thus almost invariably be demonstrated. In health the aromatic chemical substances represented by indol, phenol, etc., and their combinations, are never present in the urine in appreciable amounts; but excessive habitual intestinal putrefaction causes their unmistakable appearance. There is some conflict in theories as to the chemistry of their formation, but concerning the action of the bacteria of putrefaction on the protein molecule in the intestinal canal, it is usually agreed that this is always the initial step.

Some investigators contend that the appearance of these substances in the urine indicates simply an increased bacterial activity, and that it is not a clinical sign of any significance. But in the latest edition of his admirable work on "Clinical Diagnosis," Simon, after a critical review of the whole subject, sums up his conclusion in these words: "Bearing in mind the points here set forth, I cannot agree with others in saying that the study of indicanuria possesses no importance from a clinical standpoint. I maintain, on the contrary, that an examination of the urine in this direction is at least as important as the testing for albumen and sugar, and that points of decided importance, not only in diagnosis, but also in treatment, may thus be gained."

Those opposed to this view base their contention on the admitted innocuousness of indican. But apparently they overlook the fact that indol, the parent substance as found in the intestinal canal, has decided toxic properties, it being classed along with ptomaines such as cadaverin, putrescin, etc. It would appear reasonable, therefore, that the complex chemical action performed in the detoxication of indol within the cells of the body could scarcely be accomplished habitually without in some degree impairing their functional or structural integrity. And thus it is made clear to my mind, at least, how the long continuance of such action must in time induce disease processes. It is my belief, therefore, that a marked, persistent indicanuria, except in cases of retention of bowel contents due to some form of obstruction, or to putrefactive diseases, such as empyema or gangrene of the lungs, is one of the most constant manifestations of the condition we are here considering, and while in itself it is but a symptom, its true interpretation in relation to pathology in general medicine can scarcely be overestimated.

Its detection is a matter of the most simple procedure, and I contend that it is our impera-

tive duty to make this a part of the examination in every case of urinalysis where there is the least doubt as to the meaning of any symptom which might be explained by its presence.

Often patients do not consult the physician until after irreparable injury has been done, but possibly the process may be stayed and further damage prevented.

Now, if the position taken as to the causal relation of auto-intoxication to many of the chronic maladies is tenable, and my conclusion with reference to the disorders of digestion in connection therewith is correct, the questions of prevention and treatment assume positions of paramount importance.

Here, as elsewhere in medicine, the chief desideratum is the removal of the cause. But right on the very threshold in the management of these cases we meet our greatest difficulty; for, so long as good and tempting things to eat remain within reach of folks with appetites, much of our advice with reference to dieting will be in vain.

It is a fault common to the race that we eat too much and masticate insufficiently, and it is rudimentary that a modification of these habits should be the starting point in our efforts to correct evil results arising therefrom.

It is vastly more important how much and in what manner we eat than it is what we eat. But a mixed diet is essential to nutrition, vegetarian enthusiasts to the contrary notwithstanding.

As a matter of fact, nitrogenous foods form no inconsiderable part of vegetarian diets, so-called, and a strictly hydrocarbonaceous diet is largely mythical even in the practice of its partisan advocates. However, most individuals eat too much meat, and none will deny that at times it is important to restrict meat and protein-bearing elements almost to the point of exclusion, temporarily, in order that a marked impression may the more readily be made. The one point essential, however, is so to regulate, restrict or prohibit as to make as close approach to the normal in digestion and assimilation as is possible. But no hard and fast rules can be laid down as applicable to all cases.

The difference in the protein molecule in animal and vegetable substances is offered by some as an argument against allowing meat in these cases, the animal protein being a single molecule and free while that derived from vegetable sources is multiple and encased in a capsule of cellulose. But it is evident from this difference in structure that the animal protein is more readily acted on by the digestive juices and that a smaller amount will be needed to serve the requirements of nutrition.

At the same time it is also true that it is more susceptible to the action of the intestinal

flora. Therefore, discriminating judgment is our safest guide, studying each case by itself and observing closely the changes in the urine in response to alterations of diet.

No argument is necessary, however, to make it clear that oversupply, be it animal or vegetable, does not result in a corresponding increase in nutrition. On the contrary, elimination being overtaxed, abnormal metabolism results and the toxic end-products already mentioned accumulate, and disease processes follow—the inevitable law of cause and effect, from which there is no escape.

It follows, therefore, that to obviate the result we must eliminate the cause by lessening the amount as well as regulating the kind of food ingested.

And like attention should be given to the manner of eating. The stress of our business and social life seems to beget with us, at the table as elsewhere, the habit of hurry, and we eat too rapidly, with imperfect mastication as the result.

Another important factor may be the state of the teeth. Not only may this be the cause of imperfect grinding and poor insalivation of the food, but as is often the case, a pyorrhea exists in connection with broken and decayed teeth, which in itself is a menace not to be overlooked or underestimated. In one case coming under my observation, I strongly suspected that this was the initial point in a case of pernicious anemia.

In individuals of sedentary habits whose occupations keep them much of the time indoors, systematic exercise to increase the supply of oxygen should be insisted on.

Thus far, you will note, that nothing has been said with reference to medicinal treatment.

Without first giving attention to these general principles there is no rational place for drug medication. But to assist temporarily, by supplementing the natural processes where there is impairment of function, here as elsewhere, medicines may serve an important purpose; but to make them the sole or chief reliance is to invite certain failure and allow a bad condition to grow worse.

Artificial digestants, intestinal antiseptics, eliminants—in the way of purgatives—and tonics are often indicated; but the experienced and wise physician will need no instruction as to how or when they should be given.

Now, briefly to summarize our conclusions: First, in auto-intoxication we have the chief etiological factor in many of the chronic diseases as well as the weakening of our power of resistance against acute infections.

Second, self-poisoning results from the absorption of waste products arising from disorders of metabolism or from a similar process due to bacterial activity, or probably from both

combined, wherein the balance between production and elimination is lost.

Third, our vulnerable points vary, and consequently not all are affected alike by the same cause; in some measure immunity exists through Nature's own process of resistance, but this resistance is limited and finally overcome in the presence of persistent irritation. Again, the controlling cause of auto-intoxication, be it metabolic or bacterial, is to be found in an underlying failure in the digestive function of the bowel; oversupply of food does not result in increased nutrition, but rather the reverse is true. And finally, with reference to prevention and treatment, the former is vastly more important than the latter, in that damage already done cannot be repaired; and to this end the correction of bad habits of eating are to receive first attention, and all conditions tending to contribute, directly or indirectly, to the establishing of a vicious state of the system, such as bad teeth and a disordered condition of the gums, should receive appropriate attention; and drug medication occupies a place of wholly secondary importance.

MISSOURI PREHISTORIC MORTARS AND PESTLES

H. M. WHELPLEY, M.D.
ST. LOUIS

The pharmacist is recognized as a person of education with a general interest in the sciences, arts, industries and all that pertains to the comfort and welfare of mankind. Archaeology is a comparatively recent branch of knowledge. American archaeology is just beginning to become established among the systematic studies. Pharmacists are in a position to assist in the development of the archaeology of this country. By nature and inclination, they should take kindly to such investigations.

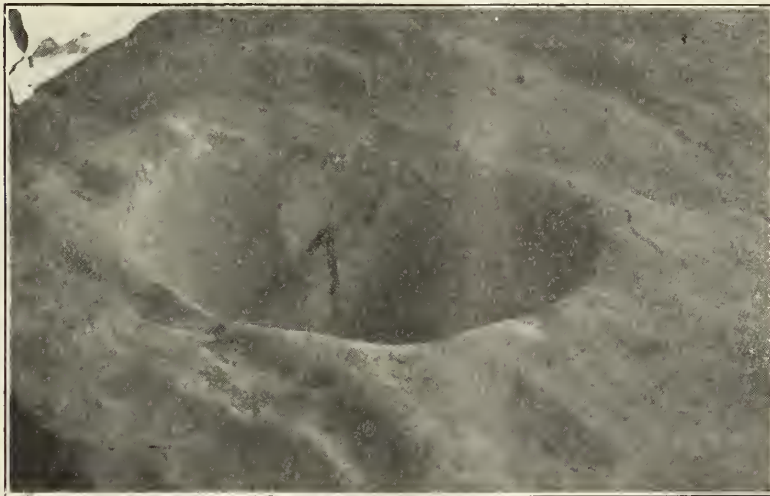
The graduate, spatula, pill tile and the pestle and mortar are utensils emblematic of the art of pharmacy. The colored show-globes are recognized by the public as the sign of a drug store, but the craft has constantly in mind the articles just mentioned and associates them with the study, art and practice of pharmacy. The origin and development of the graduate, the spatula and pill tile may be traced or easily imagined. With the pestle and mortar, it is more difficult. These are utensils of greatest antiquity. They must have been used by man very early in his history, which has been neither written nor spoken. The cracking of nuts, the opening of clams, the crushing of bones to obtain marrow and the breaking up of articles of food by the aid of two irregular-shaped

stones brought into use the most primitive form of the pestle and mortar. How interesting it would be to study an authentic series of pestles and mortars, showing each stage in the transition from ordinary stones to flattened rocks, then from stones with a concave side¹ down

Gradually, the mortar developed from a stone with a cavity which necessitated the use of a distinctive stone for a pestle. The first pestles and mortars were employed in the preparation of food.² That was before the days of medicine. In the course of time came the practice



H. M. Whelpley Collection
Fig. 1.—Prehistoric Missouri mortars (2/3 natural size).



H. M. Whelpley Collection
Fig. 2.—Prehistoric mortar in sandstone under a shelter, four miles east of Cobdin, Union Co., Ill.
Note 12-inch rule in the bowl.

the series to the pestles and mortars in an up-to-date pharmacy of the twentieth century.

The most ancient stones used for comminution do not distinguish between pestle and mortar, but the two pieces were interchangeable.

of medicine, consisting of incantations and mysticism, then the use of therapeutic agents. In time, this called for the preparation of medicines. The pestle and mortars used for culinary purposes, no doubt, alternately served in

1. Plate II, Figure 3.

2. Plate I, Figure 2.

compounding medicines. In accordance with the laws of selection and specialization, a stage of development was reached when pestles and mortars were set apart for exclusive use in connection with the practice of medicine. They

Mother Earth gives up from time to time in what is now the state of Missouri.

The prehistoric Indians of this section were the original dispensing physicians, counter-prescribing pharmacists and itinerant venders.



H. M. Whelpley Collection

Fig. 3.—Sandstone mortars from prehistoric village sites in Union Co., Ill. Note 36-inch rule at top of picture.



H. M. Whelpley Collection

Fig. 4.—Stone mortar and pestle used in a pharmacy at Monterey, Mexico, in 1897.

have persisted down from the dawn of the human race to our present stage of civilization.

We are particularly interested in the pestles and mortars for pharmaceutical use which

Just how long the Indians were in occupation of this garden spot of the Central West cannot be stated, but some ethnologists contend that the Indians date back perhaps 20,000 years.

With the advent of the white man, the Indian quickly gave up the use of flint knives and arrows, substituting them with steel and iron, obtained in trade and barter. The pestle and mortar were not so easily discarded. The white man had iron and brass mortars to offer, but the Indians looked on these more as a novelty than something to be accepted as an article of utility. Thus, the Indians continued to use stone pestles and mortars as long as they remained in this section of the country.

It is interesting to note that stone pestles and mortars of crude form are still in use among Caucasian people. I have a stone pestle and mortar³ which a medical friend obtained from a drug store in Monterey, Mexico. It was not a relic, but a utensil of every-day use.

Some of the mortars for domestic purposes were very large and not infrequently were the excavations made in large rocks occasionally so situated that they were protected by overhanging ledges. The mortars for pharmaceutical use were similar in size and probably shaped with greater care. They were made from any convenient kind of rock.

This collection of a half a dozen pharmaceutical mortars from Missouri⁴ will give some idea of the shapes and material. The study of pestles and mortars in general is a subject too broad for consideration on this occasion.

Some mortars were used for the manufacture and mixing of paints, so the cosmetic department of a modern drug store is a direct inheritance from the aborigines.

I suggest that the pharmacists of Missouri start a collection of pestles and mortars found in the state, presenting the same to the Missouri Pharmaceutical Association for exhibition with other historical matter in charge of the association historian. If each pharmacist in Missouri will let it be known through local papers that such a collection is in preparation and that due credit will be given to each contributor, I am confident that we can have a very interesting collection on display at our 1915 meeting.

I urge those who take part in this work to see to it that a careful record is made of when, where and how each specimen was found, whether on an old village site, in an ordinary grave, in a mound, or in an open field. Such information is as valuable in archaeological work as is the date of a Pharmacopoeia in a reference library.

2342 Albion Place.

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FRACTURE OF THE PATELLA AND ITS TREATMENT*

T. C. BOULWARE, M.D.,
BUTLER, MO.

The patella, as is well known to the profession at least, is a small, flat, triangular lens-shaped bone, situated in the front of the knee in the tendon of the quadriceps extensor femoris muscle, consisting of dense cancellous tissue. This bone commences its development about the third year, previous to which it is of cartilaginous nature.

From external violence or muscular action this bone is occasionally fractured, the lines of which are either transverse, oblique or vertical. The transverse fracture is caused by a fall in which the leg is strongly flexed upon the thigh, while the body is thrown suddenly and forcibly backward, thereby causing powerful tension upon, and stretching of, the extensor muscles. The line of fracture in this case usually occurs above the middle of the bone. The other varieties of fracture are caused by external violence. A real fracture of the patella may be easily detected by the following symptoms.

SYMPTOMS

Pain in the knee and disability; partial or complete loss of power or inability in the extension of the leg. The patient may be unable to rise, or if he can stand, he will be unable to move, except backward, and then only by dragging the foot of the injured limb. A patient is frequently unable to raise the heel from the bed when lying upon his back. In transverse fracture the symptoms are usually well marked. The nature of the injury is at once detectable by the noticeable change in the contour of the knee, by inability to extend the limb and by the displacement of the upper fragment. Should the patient attempt to get up and walk, he will almost surely fall, from his inability to extend the leg and support the weight of the body upon it. The displacement is usually considerable, the superior fragment being drawn upward upon the fore part of the thigh by the extensor muscles, and the distance between the fragments is always increased by bending the leg. The front of the knee has a flattened appearance, and by passing the finger over it, its point will sink down abruptly, apparently into the joint. The lower fragment is stationary but the upper one is easily moved. If some time has elapsed since the occurrence of the fracture, there may be considerable swelling in the parts, due to the effusion of synovial fluid, and occasionally a considerable quantity of blood is

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

3. Plate II, Figure 4.

4. Plate II, Figure 1

poured into the joint; especially is this the case where the fracture has been caused by external violence.

The treatment of transverse fracture is attended with serious difficulty, first on account of pressure from the accumulation of synovial fluid, and secondly, on account of the difficulty experienced in controlling the action of the extensor muscles, the constant tendency of which, especially during the first six or eight days, is to draw the superior fragment upwards, away from the lower. To counteract this tendency, therefore, is of great importance. For this purpose numerous contrivances have been used by the profession to keep the fragments together, in order to secure bony union. So far, however, none have proved satisfactory in all cases.

Both practice and observation lead me to believe that the best results are obtained by the use of the subcutaneous silver wire suture through the tendon of the quadriceps and the ligamentum patellae, which method and operation may be described as follows:

After thorough antiseptic preparation of the limb and instruments, a 5 per cent. solution of cocain is injected in the skin at the four corners of the patella; then an incision or puncture is made deeply through the skin at each place where the cocain was injected. A strong silver wire suture is passed by means of a long half-curved Hagedorn needle, from one lower incision to the other, through the ligamentum patellae, then in again at the point of exit and upward along the edge of the patella and under the skin to the upper puncture on the same side, and the wire is drawn until it disappears at the lower incision. Then the needle is introduced at the place of exit and passed transversely through the tendon of the quadriceps to the upper puncture on the opposite side; then the wire is drawn until it disappears at the upper puncture on opposite side; the needle is again introduced at place of exit at upper puncture and passed by side of patella under the skin to point of beginning. The fragments are drawn together with tenaculum inserted above and below the suture. The suture is now drawn tight and the ends of the wire twisted, cut off short and tucked back under the skin and pressed up smartly against the wire by side of the patella. Then apply antiseptic dressing and posterior splint.

After application of the suture the leg should be maintained steadily and faithfully in a complete state of extension, the thigh being flexed at the same time upon the pelvis, and the body kept in a semi-erect posture, as in this manner the extensor muscles are thoroughly and effectually relaxed. Perhaps the most efficient and successful arrangement for insuring this position of the limb is a strong, well-padded tin or wire case, long enough to reach from the middle

of the thigh to the corresponding point of the leg, a bandage having previously been applied from the toes upward and another from the groin downward. The dressing is now completed by the application of a long, thick and rather narrow compress, extending around the upper border of the patella and confined by the two bandages, passed around the joint in the form of the figure 8.

Managed and treated as above indicated, it is scarcely possible for the fracture to suffer the slightest displacement, or to conceive of anything that is better calculated to secure the end in view. At the expiration of four weeks the tin or wire case may be taken off and substituted by a leather splint and the patient may walk with crutches. The leg should in no case be used for the ordinary purpose of progression without the leather splint, for a period of from three to four months; and especial care must be observed not to flex the knee rudely or suddenly for a long time.

In the treatment of fracture of the patella, undoubtedly the greatest trouble lies in securing *bony union*, and this cannot be accomplished if the fragments are allowed to separate. If the fragments can be kept in apposition, ligamentous union is avoided. Many methods have been tried to keep the fragments securely together until union takes place, but the great majority of them have proved disappointing to the surgeon, as bony union was not the result. It is well known that if any bone is broken and the broken surfaces are put together properly and securely and firmly kept together for a certain length of time, a bony union is the result, and of course this holds good with the patella as with other fractured bones. The patella being a sesamoid bone, and situated in a tendon, has to contend with the contraction of the muscles. This is especially the case with the upper fragment. The contraction of the quadriceps muscle is so great that the appliances in most cases were unsuccessful in preventing the quadriceps muscle from drawing the upper fragment from the lower one, in which case the space between the two fragments becomes filled with ligament instead of bone. Bandages and splints alone, it is clearly shown, are inadequate to hold these fragments together in a manner to insure good *bony union*.

In some cases, incisions have been made and holes drilled in the fragments which have thus been wired together with fairly good results. But in this operation we expose the joint to inflammation and frequently have as a result ankylosis of the joint, in which case septic infection may set in and cause complications and trouble, which in some cases may lead even to the death of the patient. A fact which is admitted by all surgeons is that as a general rule it is not safe to make a compound fracture of a simple one.

DACRYOCYSTITIS, CAUSED BY A MEMBRANOUS CLOSURE OF THE NASAL DUCT*

MEYER WIENER, M.D.

AND

WM. E. SAUER, M.D.
ST. LOUIS

The importance of insisting on a thorough and careful examination of the nasal end of the tear duct is emphasized by the cases here reported. I well know that the thought is ever uppermost with the majority of practising ophthalmologists of the existence of a close relationship between lachrymal obstructions and inflammation of the nasal mucous membrane, but I also believe as the appended cases will show, that sufficient care is not always taken in determining the exact cause of obstruction of the tear duct.

CASE 1.—Mrs. A. D., 70 years of age, native American, consulted me on Oct. 19, 1905, for a mucocele of the right sac, which she stated had been present for more than a year. Previous to that, however, she had been troubled with tearing for a period of several years. She had consulted several ophthalmologists, had been subjected to numerous probings and washings of the sac with little or no benefit. She insisted that she had no nasal catarrh, was not subject to colds and demonstrated that she could easily breathe through either nostril. I washed out the sac but was unable to force any fluid through the nose, the solution regurgitating through the upper punctum. A No. 6 Bowman probe was easily passed through the duct to the nose.

It was with difficulty that she was persuaded to have an examination of the nose made; the report showed, however, no abnormality of the nasal cavity. At the instance of Dr. Sauer, another examination was made at his office with the probe introduced into the nose. A membranous obstruction prevented the probe point from entering the nasal cavity, although it could be distinctly felt and seen through this thin membranous obstruction. On October 26 the obstruction was removed by Dr. Sauer, after which fluid readily passed through the nose and the mucocele permanently disappeared. This patient was last seen by me Jan. 30, 1911, and was at that time free from any apparent trouble with the lachrymal apparatus.

CASE 2.—Mrs. B. O., 50 years of age, native German, consulted me July 10, 1913, suffering with chronic dacryocystitis of the right sac. She had had many months of treatment by various ophthalmologists, but had given up in despair, and had had no treatment for eighteen months previous to my examination. The last treatment had consisted of expressing the contents and the passing of Bowman probes. The physician had sent her to a rhinologist, but the report came to him that the nose was in perfect condition. I also experienced some difficulty in having another examination made in this case, but succeeded in persuading the patient to be examined with the introduced probe, which examination was made Aug. 1, 1913. A No. 4 Bowman probe slipped easily down into the nose. Examination of the nose showed that here also the free exit of the probe was prevented by the presence of a thin membrane covering the opening of the duct; this obstruction was slit on August 14, after which time the pus from the sac drained through the nose. This

opening soon closed, however, necessitating an excision of the membrane about four weeks later. The patient has been free from accumulation of pus in the sac and also from excessive tearing for the last month.

I wish to lay particular stress upon the importance of the nasal examination being made with the probe being introduced. This can be done by the ophthalmologist himself, or by the nose specialist if he is practised in the art. And there are some who are quite proficient.

In a search through the literature, de Schweinitz is the only authority that I have been able to find who described a similar condition and emphasizes the necessity of exposing the lower entrance of the nasal duct into the inferior meatus by means of the nasal speculum, after the probe had been introduced.

BY DR. SAUER

As stated by Dr. Wiener a pathological condition of the lachrymal canal may exist at its nasal orifice which cannot be detected by the ordinary methods of rhinoscopic examination. The opening of the duct is high up under the inferior turbinate and can be seen only with a Holmes' pharyngoscope, or when a part of the turbinate is removed. It is, therefore, necessary to pass a Bowman probe from above in order to locate the point of obstruction. In the cases reported by Dr. Wiener this was done. A part of the inferior turbinate was removed. The end of the probe was then located in a pouch of mucous membrane. The movements of the probe within the sac could be seen through the nose. The sac was then removed and the probe passed readily into the nose. A few probings were required to maintain this opening.

At various times attempts have been made to probe the nasal duct from its nasal orifice. La Forrest made the first attempt in 1730, but owing to the short distance between the opening of the duct and the floor of the nose, only a small portion of the canal could be reached. This method had been given up until Polyak resurrected it in 1902. He had a number of probes constructed with which he claimed to be able to dilate the lower portion of the canal, and reports three cases in which he succeeded in curing the epiphora. As far as I was able to learn, no one adopted his method. Caldwell made the first attempt to open the nasal duct through the nose in 1893.

In 1901 Passow described an operation in which after introducing a Bowman probe from the lower punctum as far as possible, he introduced a punch forceps in the nose and removed the anterior end of the turbinate as well as the nasal wall of the lachrymal duct, until he reached the probe. He reports a number of successful cases. Eight years ago, Hyman of Berlin advocated fracturing and turning up the inferior turbinate in those cases where the

* Read at the Ophthalmic Section, St. Louis Medical Society, Feb. 4, 1914.

obstruction was due to a turning outward and upward of the lower margin on the turbinate, especially in roomy nasal passages. When the passages were narrow he removed a part of the lower turbinate as well. Since Passow described his first operation, a number of rhinologists have advised various methods for securing a permanent opening of the canal. West, Polyak and Halle have each devised an operation for opening the duct and sac through the nose; the principle involved is the same in all three, the difference being a slight variation in the technique. After incising the mucous membrane just in front of the insertion of the middle turbinate, making either a curved or rectangular incision, the mucous membrane is then elevated and the flap turned up out of the way. The nasal wall of the lachrymal duct is then chiseled away until the sac is reached, being careful not to injure the membranous canal. The membrane is then incised up as far as the sac, when the nasal wall of the sac is removed as in Toti's operation. Halle and West replace the flap of mucous membrane, leaving a free communication between the lachrymal sac and nose; Polyak removes this flap. West has done this operation in 130 cases and claims to have been successful in 90 per cent. In some of the cases an external operation had been performed, and in these cases the results were not satisfactory; Polyak had operated upon 31 cases with satisfactory results.

In December, 1911, Yankauer described an operation in which he makes a horizontal incision one-quarter inch in length, just in front of and above the anterior end of the middle turbinate. This incision is then carried down to the anterior end of the inferior turbinate when it is carried backward along the lower margin of the inferior turbinates for one-half inch or more; the mucous membrane is then elevated and the flap turned up. The mucous membrane below the inferior turbinate is also dissected away from the turbinate, leaving the bony portion of the turbinate exposed; this portion of the turbinate is then removed with a pair of forceps as far back as the opening of the lachrymal canal; the canal is then opened with a suitable forceps. The nasal wall of the entire bony canal is removed, after which an incision is made in the membranous canal as far up as the sac; this incision is made along the posterior wall of the canal and the flap is turned forward. The nasal wall of the lachrymal sac is removed with a pair of forceps, after which the mucous membrane of the nose is stitched back in place. The nose is packed for 24 hours, at the end of which time the pack is removed and the canal is irrigated from the upper punctum with a normal salt solution. This is kept up for several days. He has operated upon nine cases, with satisfactory results in eight.

In 1911, Von Eichen devised an operation in which he opened the canal from the maxillary sinus. After opening the canal he removed a portion of the sac, since that time he has modified his operation by entering the canal from the canine fossa, without opening the antrum; his operation is done under cocain anesthesia and claims that the operation is easier and a better view of the work is obtained than when working intranasally.

DISCUSSION

DR. LUEBDE: I would like to report a case of this type. A man came to my office with the swelling usual in lachrymal obstruction. He said there had been no pain, but that this swelling had been there more than four months. When I injected borax solution into the lower punctum it passed freely into the nose. I then passed a Bowman probe to the nose without obstruction, yet the swelling remained. I could move the mass in front of the probe but could not rupture it by moderate pressure. I then passed a sharp probe as far as mass, brought the tip forward in the lachrymal fossa and stuck it into the mass. There was a gush of blood—stained watery fluid—and the man was "cured." The swelling did not recur though under observation for months. The patient believed this swelling was brought on by his habit of blowing his nose severely. It evidently was a simple membranous sac. A careful nasal examination in this case failed to reveal anything abnormal.

DR. WIENER, in closing: The point I wanted to bring out mainly, and which I hoped the members of the Section would appreciate, was the fact that the nose in these cases was seemingly practically normal. Now you have all had cases which have been sent to a nose specialist which he has examined and found pronounced involvement of the inferior turbinate or a bulging of the septum, or involvement of the lower part of the nose. In one case, I do not recall now the name, but Dr. Sauer had passed on that case as a normal nose, the patient had been sent to Dr. Alt, and Dr. Alt had sent her to Dr. Sauer some years ago and Dr. Sauer had said the nose was normal. Of course I know Dr. Alt is not to blame; he did his part to ascertain the cause, and then later this same patient came to me. We had had some experience in the meantime and Dr. Sauer then passed the probe and found this membranous obstruction. You could see the thing move behind the membrane. I could not get a bit of fluid through, and that was the point I wanted to bring out. That every examination of the nose for an obstruction of the nasal duct should be made with a probe previously introduced. De Schweinitz mentions the fact that very often we have a little membranous fold obstructing the opening of the duct, although he did not mention the fact there was a complete membranous obstruction.

THE United States Department of Agriculture has made experiments with the process of bottling pasteurized milk while hot to ascertain whether the method could be used commercially without increasing the bacterial count beyond the count that follows pasteurization of the milk in the bottles. The results of the experiments seem to indicate that pasteurization in bulk and bottling while hot then cooled with a blast of cold air is economically feasible and shows very satisfactory bacterial reduction.

THE JOURNAL

OF THE

Missouri State Medical Association

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NOVEMBER, 1914

EDITORIALS

MEDICAL STAFFS OF ST. LOUIS HOSPITALS

On November 1 a new system of selecting and appointing the visiting staffs of the municipal eleemosynary institutions of St. Louis became effective. Under this arrangement, 133 physicians took charge of the city's wards. They serve without pay and are appointed for a term of two years. Each appointee must have been in actual practice for five years.

Under the new charter recently adopted in St. Louis, all public health activities are administered by the Department of Public Welfare, under the directorship of Mr. Emil N. Tolkacz, a member of the old hospital board, which, with the board of health, automatically ceased to exist when the new charter was adopted.

As a member of the hospital board Mr. Tolkacz exhibited such splendid executive and administrative ability that the mayor appointed him to this important office. Mr. Tolkacz being one of those rare individuals who know that elevation to office does not necessarily endow the one so honored with expert knowledge of all the arts and sciences, took counsel with the representatives of the medical schools of St. Louis in the development of new plans for the care of the city charges.

Under this scheme the city hospital staff is divided into three units. The Washington University assumes the responsibility for the men who serve the city under one unit; the St. Louis University assumes the same responsibility for the second unit; the third unit is a more open service and includes the other medical schools and unattached physicians. The appointees in each unit are responsible to the director of public welfare and all are appointed by him and subject to removal by him; the only difference in the units being that those in the first two units have the added responsibility of being subject to recall by their respective schools.

The system established four years ago was an earnest effort to improve the management of the city's eleemosynary institutions and the care of the sick poor was turned over to the medical profession of the city. It was an attempt to lift

these institutions out of the domain of politics. The system had its deficiencies which resulted in strife within the board, between the board and the administration and between the board and some of the executive officers. In spite of this disharmony a medical staff of the city hospital was appointed which performed brilliant service and paved the way for inaugurating the present system.

The new method of appointment and control of the medical staff of the city hospital is in line with the practice in vogue in the municipal institutions in practically all the large Eastern hospitals at the present time and has been adopted in most of the institutions after many unsuccessful attempts to establish an efficient organization on a less comprehensive basis.

We have no hesitancy in indorsing this system. It is the correct interpretation and proper application of the principle which should govern the relationship between the city and the representative medical schools and places on them a share of the responsibility of improving and perfecting and perpetuating the system. Failure to seek the counsel and cooperation of the St. Louis Medical Society concerning the appointment of those physicians not included in the medical school nominees is an omission that should be corrected in future. In that unit lies danger if it continues uncontrolled by a body stronger than the individual who has a "powerful oar" in the sea of politics.

On another page we publish the list of physicians appointed.

THE "BIG SIX"

SIX REASONS FOR THE PERPETUATION OF THE PROPRIETARY EVIL

Under the above caption the *Jour. A. M. A.* for October 31, lays a diagnostic finger on one of the principal processes which operate detrimentally to the medical profession and retard progress toward the realization of the purposes of medical organization.

None will gainsay that organized medicine has elevated the practice and advanced the science of medicine to a higher plane than was ever attained in the past, but some complain that the methods adopted for consummating the end sought are too drastic. However, even the attitude of watchful waiting has its limits. When patient watchfulness for signs of sincere reformation meets nothing but unkept promises, forbearance ceases to be a virtue and continued palliative treatment becomes a joke. The *Jour. A. M. A.* has now put the matter up to the members and we believe they will do what is necessary to bring the medical press of this

country square with the principles governing the conduct of practitioners. Numerous signs indicate that the heaven is working; at any rate in Missouri. Our members have found that there is one way to turn back the tide of unwelcome journals which refuse to be denied when the publisher is requested to discontinue, and that is to refuse taking the journals out of the postoffice. The postmaster reports this to the publisher who knows the futility of ignoring the mandate of Uncle Sam.

On another page we publish the comment of the *Jour. A. M. A.*

CONFERENCE OF COUNTY MEDICAL SOCIETY AND CANDIDATES FOR LEGISLATURE

Pre-election conference between candidates for the legislature and the representative medical body in each county is one of the most potent means of advancing public health interests. The attitude of the organized medical profession toward legislation affecting the public health ought to be thoroughly understood by every candidate for a political office, because nearly all public officials have functions which touch more or less intimately questions that affect the health of the community. The attitude of the profession should never be a matter of doubt and the honest seeker for political preferment knows that he can obtain, by consulting the county medical society, correct information and competent advice concerning proposed measures affecting the health of the people whom he seeks to represent.

The activities of the organized medical profession are based on broad humanitarian principles and seek to protect the individual and the entire community from invasion by disease through negligence or ignorance of the people themselves or through the ignorance and incompetence of persons who are unfit to assume the serious responsibility of guarding the health of the people. There is never anything specious or misleading in the actions of the medical profession as represented in the Missouri State Medical Association and its component county societies and therefore the lawmaker or would-be lawmaker who diligently seeks knowledge on topics beyond his purview should go to the fountain heads for information.

In medical matters, in public health questions and in sanitation and hygiene, the organized medical profession is eminently qualified to give information and advice on constructive legislation.

Such cooperation as we speak of had a beginning when the Greene County Medical Society

recently invited all the candidates for state senator and representative to meet with them and discuss public health problems. The invitation was accepted and the following candidates spoke: E. L. Moore of Lamar, candidate on the Democratic ticket for senator; J. B. Gooch of Springfield, Republican candidate for senator; Wash Adams of Springfield, Democratic candidate for representative of the first district and F. T. Stockard of Republic, Republican candidate for representative of the second district.

The meeting profited both candidates and doctors. The former learned much concerning the real purposes of organized medicine not easily comprehended by the uninformed mind, while the doctors found that the life of the legislator was not all a bed of roses, and that good bills often met disaster through exigencies not readily controlled by those who really were friendly to the measures.

The discussion included the standards of practice, the menace of the quack, deceptive and dishonest advertising of a medical character and the institutional care of chronic tuberculosis. Before the close of the meeting all the candidates declared their approval of legislation along the following lines:

A high standard of proficiency of the medical profession.

Elimination of quacks and everything that resembles quackery.

The enactment of a law prohibiting newspapers from publishing ads in which claims are made of any supernatural power to cure incurable diseases.

Establishment of district sanatoriums for advanced cases of tuberculosis.

Mr. E. L. Moore, one of the candidates for state senator, was representative from Barton County in the 45th general assembly, declined renomination for the 46th, but served as representative in the 47th general assembly. He was prosecuting attorney for Barton County for eight years and enjoys the respect and confidence of the medical fraternity throughout the district. In the last legislature he served on the judiciary, the railroad and the life insurance committees, being chairman of the latter. We do not know what political office the other candidates have held.

This sort of gathering between candidates for office and representative medical men in a county is conducive to the happiness and prosperity of the people, as it will bring into harmonious relation members of two professions whose vocations make them guardians of the people's rights; the lawyer, the guardian of the rights of property, the physician, the guardian of the rights of health.

NEW CHARTER FOR ST. LOUIS

When St. Louis recently adopted a new charter whereby the fourth city in the Union equipped itself with accoutrements of modern type for conducting the affairs of an important municipality to the best interests of the entire population, a great change was made in the administration of public health affairs as well as in other departments. It is believed the new charter will sweep away many obstacles thrown in the path of progress by the limitations of the old charter and create numerous opportunities for increasing the greatness of the city.

Among the changes effected the one which is specially interesting to the medical profession is the method of administering the hospital and health departments, the division of parks and recreation and the division of correction, all being under the supervision and control of the Director of Public Welfare. The Health Commissioner, the Hospital Commissioner, the Commissioner of Parks and Recreation and the Commissioner of Correction will be appointed by the Director of Public Welfare.

The Health Commissioner will have large discretionary powers, much broader and more inclusive than obtained under the old charter. All police officers are charged with the duty of observing the sanitary conditions in their districts and are required to report to the Health Commissioner, through the Chief of Police, the presence of any disease or nuisance in their district.

The Hospital Commissioner has charge and supervision of the operation and maintenance of all the hospitals, infirmaries, medical laboratories, dispensaries and other charitable institutions of the city.

The Commissioner of Parks and Recreation will have the supervision and control of all public parks, and of all facilities provided by the city for recreation, amusement and instruction.

The Commissioner of Correction will have charge and supervision of the operation and maintenance of all detentive, penal and corrective institutions of the city.

The charter empowers the board of aldermen to include in the Department of Public Welfare provision for research and publicity concerning the cause of poverty, delinquency, crime and disease, or concerning other problems relative to public health, morals and welfare, and to promote the education of the city with regard thereto; for free legal aid, for a municipal lodging house and for a city free employment bureau.

If intelligently administered and properly safeguarded against invasion by any spoils system of political control, these wide powers give St. Louis large opportunity for constructive measures to conserve the health of the people.

The Mayor and the directors of the various departments which compose his "cabinet" were

guests of the St. Louis Medical Society at one of the regular meetings last month and they explained the probable direction which their efforts would take for the improvement of public health. The remarks of these gentlemen on that occasion will be published in *THE JOURNAL* in a later issue.

THE NEW BRITISH PHARMACOPEIA

After many delays the British Pharmacopeia of 1898 has been superseded by the British Pharmacopeia of 1914, or, to be accurate, copies of the book were made available for inspection Oct. 1, 1914, the announcement being made at the same time that the book is to go into force on Dec. 31, 1914.

Following the trend of the times, the new pharmacopeia, using the metric system of weights and measures only in the working formulas for preparations, though doses are still expressed in the antiquated Imperial grain system in addition to the metric system. In reference to this increased recognition of the metric system, the *British and Colonial Druggist* (Oct. 2, 1914) suggests that "it is, perhaps, the thin end of the wedge toward popularizing the metric system, which will probably be made compulsory in general trade before many years have passed." In regard to the retention of doses in the grain system, the British drug journal says, with evident regard for a slow-moving medical profession, "this is very wise, as it will take some considerable time to become familiar with doses in Continental style."

Regarding the gradual displacement of vegetable drugs and their galenic preparations and the increased use of definite chemical bodies, the remark is made that "during the sixteen years which have elapsed since the last edition was published, the practice of medicine has greatly developed, with a marked tendency toward the rejection of old-fashioned remedies and the use of more definite chemical compounds and active principles in the pure state in place of galenicals prepared from drugs of somewhat variable composition."

It is disappointing to learn that "*Neither Physiological Standardization nor Serums* find a place in the new British Pharmacopeia."

The British Pharmacopeia is published under the direction of the General Council of Medical Education and Registration, that is, by medical men—the pharmacists assisting in the revision only in an advisory capacity. The additions to and the deletions from the book should reflect the present medical opinion in Great Britain and should show which drugs have made a place for themselves since the publication of the previous edition, and also give an indication of those drugs which "have been tried and found

wanting." Among the drugs which were not in the last edition, but which are described in the new edition, are acetylsalicylic acid, picric acid, epinephrin (under the name Adrenalinum, which is claimed as a proprietary name in the United States), and the solution of its hydrochlorid, veronal (under the name Barbitonum), beta-eucain lactate (as benzaminae lactas), calcium lactate, cantharidin (replacing the unreliable cantharides), chloral formamid, cresol, diethylmorphin hydrochlorid or dionin (as diamorphinae hydrochloridum), guaiacol and guaiacol carbonate, hexamethylenamin (as hexamina, a name considered proprietary in the United States), phenolphthalein, sodium acid phosphate and theobromin sodium salicylate. From among the many articles contained in the 1898 edition, but deleted from the new book, we find: gallic acid, gamboge, cantharides, cerium oxalate, black cohosh, coca leaves, conium leaves, conium fruit, saffron, ferric arsenate, hops and lupulin, pareira, picrotoxin, elder flowers, sarsaparilla, sodium sulphocarbolate and zinc sulphocarbolate.

While in the United States, where the pharmacists dominate in the revision of the Pharmacopeia, there is a growing opinion among physicians that the medical profession should have a greater share in future revision, British pharmacists are desirous of obtaining greater participation in the revision of their pharmacopeia; thus the *British and Colonial Druggist* opines: "If pharmacists have their way the revision of the British Pharmacopeia will in future be conducted on very different lines, and we believe to the mutual advantage of themselves and the medical profession, and for the good of the whole community." While a definite opinion as to the utility of the new British Pharmacopeia as a guide to medical prescribing must be deferred until copies of the book become available, the list of admissions and deletions indicates that the book is a very fair representation of rational materia medica and a credit to those who controlled the revision of the pharmacopeia, the objections of our British pharmacists notwithstanding.

From this it is evident that such potassium salts as potassium hydroxid, potassium carbonate and potassium bicarbonate (used for their neutralizing action), potassium acetate and potassium citrate (used because the organic radical yields carbonate in the intestinal tract), potassium iodid (used for its iodid component), potassium permanganate (used for the oxidizing action of its permanganate radical) and many others, "never would be missed." In fact, a dearth of potassium salts would have a rationalizing influence on our materia medica in that, where now both the potassium and the sodium salts of many acids are in use, our materia medica would be improved and simplified at the same time by the abandonment of most of the potassium salts as therapeutic agents.

These considerations remind us that our materia medica contains a very large number of salts which are just as superfluous as many potassium salts. The use of lithium salts as uric-acid solvents was based on a misinterpretation of chemical facts. There is no reliable clinical evidence that lithium salts increase the excretion of uric acid by the kidney except as they exert a diuretic action; and this is not superior to that of corresponding potassium or sodium salts. Experimental work has failed to show that lithium salts or the alkalis cause the absorption of deposited urates in gouty tophi.

The lithium ion acts as a depressant on the heart, though less so than the potassium ion. It acts as a gastric irritant and disturbances of the alimentary tract have been produced by the administration of lithium salts. While lithium bromid, lithium iodid and lithium citrate have had some vogue in medicine, these salts possess no advantage over the corresponding potassium or sodium salts, and have been practically abandoned.

Therapeutics would be advanced, we are confident, were all lithium preparations deleted from our Pharmacopeia. Also both the health and the pocketbook of the public would be conserved if the medical profession could be persuaded to taboo the scores of proprietary lithia salts, lithia tablets and lithiated this and that.

THERAPEUTIC VALUE OF LITHIUM SALTS

The prospect that the European war will bring about a shortage in the supply of our potassium salts has served to remind us that most of the potassium salts used in medicine are used for the therapeutic effect of their acid radical or anion. In most cases the depressing action which is exercised on the heart and circulation by the potassium part of the compound could with advantage be replaced by the somewhat stimulating action of the sodium ion when the corresponding sodium salts are used instead.

OBITUARY

HARRY C. WAKEFIELD, M.D.

Dr. H. C. Wakefield, acting assistant surgeon of the United States Marine Hospital, at St. Louis, died at the hospital October 6, age 44, from appendicitis. He was born in Otterville, Mo., and graduated from the Beaumont Hospital Medical College, St. Louis, 1892. He entered the Marine Hospital service soon after receiving his diploma and remained in the service continuously until his death.

J. PORTMAN CHESNEY, M.D.

Dr. J. P. Chesney, for many years a resident of St. Joseph, and a practitioner for almost half a century, died at the home of his daughter in Kansas City, October 10, aged 81. He was born in Lexington County, Kentucky, and located in Holt County, Missouri, about 1856. He graduated from the Medical Department, Washington University, about 1860. Two of his daughters married physicians in St. Joseph: Drs. O. B. Campbell and H. S. Forgraves.

NEWS NOTES

DR. ROBERT H. FINLEY of Cuba was married to Mrs. Mildred Leaver of St. Louis, October 14.

DR. A. E. TAUSSIG of St. Louis has been elected chief of the medical staff of the Jewish Hospital.

DR. WILLIAM PORTER of St. Louis has moved to Ocean Springs, Mississippi, where he will reside permanently.

DR. F. W. DIEMER of Springfield was found guilty in the federal court recently of sending improper literature through the mails. He was fined \$500.

DR. MARSHALL A. SMITH of Gallatin, Secretary of Daviess County Medical Society, was married to Miss Jessie McCue of Gallatin, October 20.

ON October 12 the United States Public Health Service reported thirty cases of human plague at New Orleans and 181 rats found with plague infection.

DR. ROBERT L. BARCLAY of St. Louis was married to Mrs. Emily B. Jourdan of St. Louis, on October 17. They will reside at 4216 McPherson Avenue, St. Louis.

DR. FRANKLIN LIGHTFOOT of Excelsior Springs has moved to Colfax, Iowa. He has accepted the position of medical director and resident physician at Hotel Colfax and Mineral Springs.

DR. WILLIAM F. ALLEN, for some years a practitioner in Stoddard County and at present located in St. Louis, at 4359 Taft Avenue, has been convicted of assault on a young girl at Dexter, Stoddard County.

THE Barnes Hospital at St. Louis was dedicated Tuesday, October 27, and the buildings thrown open for inspection. It is located on Kingshighway at Forest Park and will be used in connection with the Medical Department of Washington University.

DR. L. C. BOISLINIERE of St. Louis spent two days in Knox County last month delivering public lectures on tuberculosis. The tour was conducted under the auspices of the Knox County Medical Society and financed by the County Court of Knox County.

DR. THOMAS OPIE, one of the six men who founded the College of Physicians and Surgeons of Baltimore, and Professor of Gynecology at that institution, died in Washington, October 6. His son, Dr. Eugene L. Opie, is Dean of the Medical Department of Washington University at St. Louis.

THE Chicago and Alton Railway Surgeons held their third annual meeting at Kansas City, October 9 and 10. Dr. P. B. Magnuson of Chicago is chief surgeon and during the session demonstrated his method of using ivory for uniting fractures. About forty surgeons attended the meeting, which closed with a banquet at the Coates House.

THE advertising doctors of St. Louis who were indicted by the Grand Jury for using the mails to defraud through the persistent efforts of the St. Louis *Star* and the St. Louis Medical Society, were freed by the order of Judge Dyer on a technical error in the indictment. Judge Dyer, however, indicated in his order that the cases will be presented to the Grand Jury again when a new indictment may be drawn.

CLEAN UP DAYS. What's the matter with having a "Clean Up Day" in this town once a month? If every business house in town closed up for half a day once each month and everybody turned out we could keep this burg as spick and span as a house floor, and it would be no hardship or expense to anyone.

Just ask any doctor what it would mean to the community as a sanitary measure.

It would be a jolly good monthly picnic, with a little profitable work thrown in.

Why not?—*Salisbury Press-Spectator*.

THE Bayer Company announce as erroneous the impression prevailing in certain quarters that they have discontinued supplying the Bayer products; they state they are sufficiently provided to meet all demands. The prices remain unchanged except in the case of aspirin and veronal, the higher cost of raw material compelling an increase in the price of those two articles. Nearly all the Bayer products have been accepted by the Council on Pharmacy and Chemistry and several have been admitted to the United States Pharmacopœia.

JOHNSON COUNTY will have her annual round-up November 26, 27 and 28, don holiday attire, lay aside business cares and discuss methods of improving the conditions of her people. The Johnson County Medical Society will take a prominent part in this gathering and hold a public health meeting and a Baby Health Conference on the 28th. The president, Dr. H. C. Shuttee, will deliver a lecture at the public health meeting and Dr. George H. Hoxie of Kansas City, will be one of the principal speakers. The local physicians will examine the babies, using the score card and pamphlets of the American Medical Association. A full report of the meeting will be published in our December issue.

THE Southeast Missouri Medical Association held its semi-annual meeting at Sikeston, October 20, 21 and 22. About forty members and visitors attended the meeting which was unusually profitable and instructive. A report of the meeting will be published in our next issue. The society sent a message to United States Prosecuting Attorney Oliver at St. Louis, requesting him to use all means in his power to prosecute the medical fakers who had been exposed by the St. Louis *Star* and indictment quashed by the Federal Court. Fredericktown was chosen for the next meeting in May, 1915.

THE fifth annual meeting of the American Association for Study and Prevention of Infant Mortality will be held in Boston, November 12, 13 and 14. Public school education for the prevention of infant mortality will be the chief topic of discussion on November 14. Dr. Helen C. Putnam of Providence is the chairman of this section. Several university, college and high school courses within these four years have added the subject of infancy or care of children, a few of them doing excellent practical and extension work. Ideals are growing steadily toward education for parental duties.

SHARPE & DOHME have apparently reached the limit of human ingenuity in safeguarding the public against accidental poisoning with bichlorid of mercury tablets. Their new tablets are marketed in a bottle of peculiar shape and plainly labeled "mercuric bichlorid tablets." The tablets themselves are strung on a cord, at intervals of about half an inch, are shaped in the form of a clover leaf and each is stamped "poison." The firm deserves to be commended for abandoning the uncertain and the dangerous term "Antiseptic Tablets," and using the plain, distinct, unmistakable, descriptive title.

THE secretary of one of our county units bought a syringe from one of our advertisers, and in a letter to him remitting the amount, he says that he will call the attention of the members of the society at its next meeting, to the excellent character of the instrument, reasonable price, etc.: "You are entitled to this as a constant advertiser in *THE JOURNAL*." Certainly. The members are entitled to know of a good thing; the dealer is entitled to the help and the support and patronage of the members, for he helps the members by advertising in their *JOURNAL*; and *THE JOURNAL* guarantees the reliability of what he advertises. This is true of all our advertisers and it is our duty, especially at this time, to cooperate with those who cooperate with us. Please do your part to help.—*California State Journal of Medicine*. [That is cooperation.—Ed.]

MEMBERSHIP CHANGES, OCTOBER

NEW MEMBERS

J. W. Hardesty, St. Louis.
David R. Lamb, St. Louis.
E. M. Lucke, St. Louis.
Joseph C. Manning, Skidmore.
Wm. D. Petit, St. Louis.
A. C. Reynolds, Bethany.
Max Pollack, St. Louis.
L. R. Sante, St. Louis.
Clarence V. Smith, St. Louis.
A. L. Stadtherr, St. Louis.
Ed. F. Stadtherr, St. Louis.
Herbert I. Taylor, St. Louis.
John R. Vaughan, St. Louis.

CHANGE OF ADDRESSES

Ford A. Barnes, Koshkonong to Thayer.
Clifford F. Busard, Robinson, Ill., to Muskegon, Mich.
E. H. Bryson, Bethany to Grand Junction, Colo.
Elizabeth Bentele, St. Louis to Detroit, Mich.
Maurice Dick, Cole Camp to Stover.
Harry J. Frien, Springfield to Belleville, Ill.
D. M. Huffman, Springfield to Crane.
Emery E. Evans, New Franklin to Eugene.
Harry Greensfelder, Kirkwood to Clayton.
E. F. Higdon, Polo to Richmond.
W. H. Gibbs, Mexico to Roswell, N. Mex.
R. C. Henderson, Kansas City to Atchison, Kans.
Frank Lightfoot, Excelsior Springs, to Colfax, Iowa.
C. S. McGinnis, St. Louis to Houston, Tex.
Hans Lisser, St. Louis to San Francisco, Cal.
L. J. Matlock, St. James to Caruth.
John Mitchell, Exeter to Fairview.
Benj. E. Moody, Clarence to Jacksonville.
Homer McGhee, Hardin to Kansas City.

Chas. E. Legg, Rosebud to Ewing, Neb.
 Walter W. Murphy, Kansas City to Lewis, Iowa.
 J. F. Osborn, St. Joseph to Corning.
 Wm. A. Smith, St. Louis to Webster Groves.
 R. C. Schooley, Robins R. D. Fayette to Odessa.
 H. B. Shedd, St. Louis to La Porte, Ind.
 Orra L. Rutherford, Bellflower to Winona.
 J. T. Redwine, Poplar Bluff to Wickliffe, Ky.
 Wm. Porter, St. Louis to Ocean Springs, Miss.
 A. L. Stepp, Canalou to Vanduser.
 Max Myer, St. Louis to Columbia.
 A. M. Townsend, St. Joseph to Walnut Grove.
 E. P. Whitford, Hollister to Bridgewater, N. Y.
 W. H. Wiley, Westboro to Ridgeway.

REINSTATED

Wm. S. Campbell, Albany.
 Emery E. Evans, Eugene.

RESIGNED OR DROPPED

F. C. Brooks, St. Louis.
 John M. Darden, St. Louis.
 M. Pickney Morrell, St. Louis.
 Louis F. Hulesman, Boonville.
 Arthur H. Juengal, St. Louis.
 Orrin C. Lowe, St. Louis.
 Wm. B. Winn, St. Louis.

DECEASED

Edwin T. Doty, Anderson.

NEW AND NONOFFICIAL REMEDIES

IN our September issue we mentioned articles manufactured by the Antiseptic Supply Company which had been accepted by the Council on Pharmacy and Chemistry and included with "N. N. R." The manner in which this announcement was printed left room for doubt as to the different ingredients (and strengths) in the articles. The manufacturers are anxious that physicians shall know precisely what the articles contain, hence we repeat the announcement in more definite form: Causticks (Silver Nitrate, 75 per cent.). Caustick Applicators (Silver Nitrate, 75 per cent.). Stypsticks (Alum, 75 per cent.). Stypstick Applicators (Alum, 75 per cent.). Cupristicks (Copper-Alum). Cupric Applicators (Copper-Alum).

THE following articles have been accepted for inclusion with "N. N. R." during the month of October:

Abbott Alkaloidal Co.: Strepto-Bacterin (Human): packages of six ampoules, each containing 100 million killed bacteria. Slee's Normal Horse Serum: vials containing 100 c.c.

H. M. Alexander and Co.: Typhoid Vaccine. Greeley Laboratories, Inc.: Acne Vaccine: packages of six syringes, each containing 12 million bacteria. Colon Vaccine: packages of six syringes, each containing 1,000 million bacteria. Pyocyanus Vaccine: packages of six syringes each containing 1,000 million bacteria. Gonococcus Vaccine: packages of six syringes, each containing 500 million bacteria. Pneumococcus Vaccine: packages of six syringes, each containing 500 million bacteria. Staphylococcus Albus Vaccine: packages of six syringes, each containing 1,000 million bacteria. Staphylococcus Aureus Vaccine: packages of six syringes, each containing 1,000 million bacteria. Streptococcus Vaccine: packages of six syringes each containing 500 million bacteria. Typhoid Bacillus Vaccine: packages of six syringes, containing 1,000 million bacteria; packages of six syringes containing, respectively, 100, 200, 400, 600, 800 and 1,000 million bacteria.

Memorial Institute: Diphtheria Antitoxin, 10,000 units.

H. K. Mulford Co.: Friable Tablets of Emetine Hydrochloride. Pyocyano Bacterin: packages of four syringes containing 50, 100, 200 and 400 million killed bacteria.

Pasteur Institute of St. Louis: Antirabic Vaccine.

Schiffelin and Co.: Acne Vaccine: packages of four syringes containing respectively 5, 10, 20 and 40 million B. acne. Antimeningococcus Serum: 30 c.c. cylinder; 20 c.c. vial. Colon Vaccine: two vial packages containing 50, 100, 200 and 400 million killed bacteria. Gonococcus Vaccine: five syringes, containing, respectively, 50, 100, 200, 400 and 1,200 million killed bacteria. Scarlet Fever Treatment: packages of four vials, containing 50, 100, 200 and 400 million killed bacteria.

E. R. Squibb and Sons: Bacillus Coli Communis Vaccine, box of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed bacilli, with a syringe. Pyocyanus Vaccine, box of six ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed bacilli, with a syringe. Staphylo-Acne Vaccine, box of six ampoules containing 100 million killed staphylococci and 20 million killed acne bacilli, 100 million killed staphylococci and 20 million killed acne bacilli, 500 million killed staphylococci and 50 million killed acne bacilli, 500 million killed staphylococci and 50 million killed acne bacilli, 1,000 million killed staphylococci and 100 million killed acne bacilli and 1,000 million killed staphylococci and 100 million killed acne bacilli, with a syringe. Streptococcus Vaccine, boxes of six ampoules containing 100, 100, 500, 500, 1,000, 1,000 million killed streptococci, with a syringe.

Standard Chemical Co.: Radium Bromide.

CORRESPONDENCE

PRAISES DEFENSE COMMITTEE

DR. ROBERT E. SCHLUETER,
Chairman Defense Committee, St. Louis.

Dear Doctor:—I want to thank you and other members of the Defense Committee for the support recently given me on account of the damage suit against me.

We have won a victory, and I can say that every member of the society stood by me when it came to a "show down."

I have always been strong for the medical organization, but shall be more so than ever from now on.

[The jury in this case was out only ten minutes, then brought in a verdict for the physician.—ED.]

BETZ IS WILLING TO BE SHOWN

HAMMOND, IND., Oct. 27, 1914.

DR. E. J. GOODWIN, Sec'y-Editor.

Dear Doctor:—The Cooperative Medical Advertising Bureau has been urging me for some time to advertise in the state medical journals. On several occasions I have tried different ones, but, not securing results, I came to the conclusion that they were not good advertising mediums.

However, the Bureau insists that the officially owned state journals have made great advances during the past year, and that the members of your society are intensely interested in the welfare of their state journal. Therefore, after further deliberation, we have concluded to place our advertisement in all the state journals represented by the Cooperative Medical Advertising Bureau. You will shortly receive through them an order and copy for one-half page space.

Under another cover I am mailing you our latest catalogue. All of our goods are absolutely as represented, and when anyone is dissatisfied, we gladly refund the money.

It would give me pleasure to know you personally, and if you are ever in this vicinity, I should like to have you call and inspect our plant. I am sure I would have no difficulty in showing you why and how we serve the medical men to such great advantage.

Yours very truly,

FRANK S. BETZ.

[We publish the above letter for the reason that it states succinctly the viewpoint of the advertiser toward the journals to be employed for announcing his products to the medical pro-

fession. Nothing can be plainer, simpler nor more pointed, and we hope our members will give thought to this phase of organization work. We believe our JOURNAL is the best medium in this state for the reputable manufacturer who deals honestly with the profession. Our Association requires advertisers to conform to certain rules before we admit them to the advertising pages. Therefore, the members know that the appearance of an announcement in our JOURNAL is a guarantee that the firm is working in harmony with the principles of the organization.

What then is our duty? Plain, simple and immediate cooperation with the advertiser. Let every member show his loyalty to the organization and begin at his earliest opportunity to patronize our advertisers.

The Frank S. Betz Company advertisement begins with this issue.—ED.]

MISCELLANY

LOOKING BACKWARD

Supreme Court Restores Spriggs' License

STATE ex rel. SPRIGGS v. ROBINSON et al.,
State Board of Health

(*Supreme Court of Missouri, Division No. 2 Dec. 6, 1913.*)

1. PHYSICIANS AND SURGEONS (§ 11*)—RIGHT TO PRACTICE—NATURE.

The right of a licensed physician to practice is not a mere shadowy privilege which may be revoked regardless of whether the possessor has violated the laws of the state, but is a valuable privilege and perhaps a property right, which is protected at least by such safeguards as the Legislature has thrown around it.

[Ed. Note.—For other cases, see Physicians and Surgeons, Cent. Dig. § 15; Dec. Dig. § 11.*]

2. PHYSICIANS AND SURGEONS (§ 11*)—REVOCATION OF AUTHORITY TO PRACTICE—STATUTORY PROVISIONS.

Rev. St. 1909, § 8317, authorizing the State Board of Health to refuse to license to practice medicine and surgery persons guilty of unprofessional or dishonorable conduct and to revoke licenses for like causes, and specifying certain acts which shall be deemed unprofessional and dishonorable conduct, but providing that these specifications are not intended to exclude all other acts for which licenses may be revoked, so far as it authorizes the revocation of licenses, is highly penal and must be so construed.

[Ed. Note.—For other cases, see Physicians and Surgeons, Cent. Dig. § 15; Dec. Dig. § 11.*]

3. STATUTES (§ 241*)—CONSTRUCTION—PENAL STATUTES.

A penal statute is construed with a degree of strictness commensurate with the severity of the penalty it imposes, and where the penalty is onerous no one can be held to have violated its provisions unless his acts come within both the letter and the spirit of the law.

[Ed. Note.—For other cases, see Statutes, cent. Dig. §§ 322, 323; Dec. Dig. § 241.*]

4. STATUTES (§§ 174, 175*)—CONSTRUCTION—RATIONAL CONSTRUCTION.

All laws must receive a rational and not an arbitrary construction.

[Ed. Note.—For other cases, see Statutes, Cent. Dig. §§ 254, 266; Dec. Dig. §§ 174, 175.*]

5. PHYSICIANS AND SURGEONS (§ 11*)—PROCEEDINGS TO REVOKE LICENSES—EVIDENCE.

Under Rev. St. 1909, § 8317, authorizing the State Board of Health to revoke licenses to practice medicine and surgery for producing criminal abortions, an advertisement by a physician, stating that his practice was limited to "diseases of women and surgery," and the testimony of a witness, that several physicians had told him that such physician had the reputation of being a criminal abortionist, would not sustain a suspension from practice.

[Ed. Note.—For other cases, see Physicians and Surgeons, Cent. Dig. § 15; Dec. Dig. § 11.*]

6. EVIDENCE (§ 317*)—HEARSAY EVIDENCE—STATEMENTS OF THIRD PERSONS.

In a proceeding to suspend a physician for producing abortions, the testimony of a witness, that physicians had told him that defendant had the reputation of being a criminal abortionist, was hearsay evidence and should not have been admitted or considered.

[Ed. Note.—For other cases, see Evidence, Cent. Dig. §§ 1174-1192; Dec. Dig. § 317.*]

7. PHYSICIANS AND SURGEONS (§ 11*)—SUSPENSION FROM PRACTICE—GROUNDS.

Under Rev. St. 1909, § 8317, authorizing the State Board of Health to revoke licenses to practice medicine and surgery for unprofessional or dishonorable conduct, and providing that habitual drunkenness, drug habit, excessive use of narcotics, producing criminal abortions, or soliciting patronage by agents shall be deemed unprofessional and dishonorable conduct, but that these specifications do not exclude all other "acts" for which licenses may be revoked, a willingness or offer to produce an abortion does not justify suspension of the right to practice, in view of the fact that the ground specified all grow out of intentional affirmative acts, while the general specification which follows refers only to "acts."

[Ed. Note.—For other cases, see Physicians and Surgeons, Cent. Dig. § 15; Dec. Dig. § 11.*]

8. STATUTES (§ 194*)—CONSTRUCTION—GENERAL AND SPECIFIC WORDS.

Where a law specifically designates several matters or things which shall be governed by its provisions, and then by general language undertakes to include other acts and things not specifically named, it must be so construed as to apply only to things or acts of the same general nature as those definitely set out.

[Ed. Note.—For other cases, see Statutes, Cent. Dig. § 272; Dec. Dig. § 194.*]

9. PHYSICIANS AND SURGEONS (§ 11*)—SUSPENSION FROM PRACTICE—GROUNDS.

Under Rev. St. 1909, § 8317, authorizing the State Board of Health to refuse to license to practice medicine and surgery persons guilty of unprofessional or dishonorable conduct and to revoke licenses for like causes, and specifying certain acts which shall be deemed unprofessional and dishonorable conduct, but providing that these specifications are not intended to exclude all other acts for which licenses may be revoked, the board is not authorized to determine what shall constitute dishonorable and unprofessional conduct, in view of Const. art. 4, § 1, vesting the power to make laws in the General Assembly, and article 3,

prohibiting executive officers from performing legislative functions.

[Ed. Note.—For other cases, see Physicians and Surgeons, Cent. Dig. § 15; Dec. Dig. § 11.*]

10. PHYSICIANS AND SURGEONS (§ 11*)—SUSPENSION FROM PRACTICE—GROUNDS.

Assuming that, under Rev. St. 1909, § 8317, authorizing the State Board of Health to revoke licenses to practice medicine and surgery for unprofessional or dishonorable conduct, specifying certain acts which shall be deemed unprofessional and dishonorable conduct, but providing that these specifications shall not exclude all other acts for which licenses may be revoked, the board may determine what shall constitute dishonorable and unprofessional conduct, it could not suspend a physician for offering to commit an abortion where it had made no law or rule prohibiting offers to commit abortions, in view of Const. art. 2, § 15, prohibiting the enactment of laws retrospective in their operation by the General Assembly.

[Ed. Note.—For other cases, see Physicians and Surgeons, Cent. Dig. § 15; Dec. Dig. § 11.*]

Appeal from St. Louis Circuit Court; G. C. Hitchcock, Judge.

Proceeding by the State, on the relation of M. Luther Spriggs, against E. F. Robinson and others, comprising the State Board of Health. From a judgment sustaining the action of the Board in suspending relator from the practice of medicine and surgery, he appeals. Reversed, and action of the Board quashed.

Appeal from the judgment of the circuit court of St. Louis city sustaining the action of the State Board of Health in suspending the appellant from the practice of medicine and surgery in this state for a period of one year. The charge upon which appellant was suspended is that he was guilty of "unprofessional and dishonorable conduct," in that he offered, or was willing, to commit a criminal abortion. Prior to October 19, 1912, appellant was engaged in the practice of medicine and surgery at Joplin, Mo., and the evidence upon which he was suspended from practice is mostly documentary, and is as follows:

First. The following advertisement inserted by appellant in a newspaper at Joplin: "Dr. M. Luther Spriggs. Practice limited to diseases of women and surgery. Office and private hospital, 417 S. Cox avenue. Consultation hours, 9 to 12 a. m., 2 to 4 p. m. Home phone 411, Bell phone 517. Residence, The Connor." After this advertisement appeared, a post office inspector caused certain letters to be written and mailed to appellant from Galena, Mo., to which letters was affixed the name "Susie Davis." Said letters and the appellant's replies thereto are as follows:

"Galena, Mo., May 10th, 1912. Doctor M. Luther Spriggs—Dear Sir: I cut the enclosed from a Joplin Globe of last Sunday, and wish to write you, as I was about to go to Kansas City or somewhere away from here. I am not married and was indiscreet to allow my beau liberties which I should not have done. The worst of it is, I am caught, I fear, and in a family way. I missed just twice. I ought to be sick the 14th of this month, but I don't know whether I will or not. I have taken all kinds of medicine without avail. I am scared every day of discovery and believe I am getting larger. Please let me know if you will take it away and how much it will cost. I ask no charity as I have some money and I know the young man the cause of the trouble will furnish more, if needed. We can pay you well between us. Please destroy this letter. Yours truly, Susie Davis, Galena, Mo."

"Joplin, Mo., May 11, 1912. Miss Davis: Replying to yours of the 10th inst., allow me to say that you should come here at the earliest possible moment. At

that time we can go fully into all of the details. Very truly yours, M. Luther Spriggs."

"Galena, Missouri, May 21st, 1912. Doctor M. Luther Spriggs—Dear Sir: Replying to your letter in regard to my coming to Joplin for operation, I would ask what the approximate cost will be. I do not want to make the trip to Joplin without enough money to have the work done. I can get the money casier now than I can get it after I get there. I can leave here as soon as I hear from you. Yours truly, Susie Davis, Galena, Mo."

"Joplin, Mo., May 22, 1912. Dear Miss Davis: Will say in reply to yours of the 21st inst., that your bill with me will be approximately \$125.00 and your living expenses will have to be met for something like a week or possibly ten days. It seems to me that \$150.00 should be ample to take care of everything. Remember that it is important to act as promptly as possible. Very truly yours, M. Luther Spriggs."

"Galena, Missouri. Dr. M. Luther Spriggs—Dear Sir: Replying to your favor of the 22nd inst., I had no idea the price for relieving one in a family way was over \$25.00 to \$50.00. While I can get more than this, I much fear that I cannot raise the amount you mentioned, and unless you can do some better for me, I must make other arrangements. I can raise \$100. Please write me without delay what you will do. Yours truly, Susie Davis, Galena, Mo. May 26th 1912."

"Joplin, Mo., May 26, 1912. Dear Miss Davis: Replying to yours of to-day allow me to say that we do not ordinarily make any concessions in such matters. However, I am willing under the circumstances, to allow you the reduction you speak of, viz.: \$100.00 professional fee. You will of course have to defray your living expenses for a week or ten days, which will be moderate, and I will be glad to assist you to make arrangements in this way that will be satisfactory. Hoping this will meet with your approval. Very truly yours, M. Luther Spriggs."

"Galena, Mo., May 30th, 1912. Dr. M. Luther Spriggs—Dear Sir: Replying to your letter of the 26th inst., I thank you for the concession you have made, but since my last letter, I have come unwell a little. Do you think I could be pregnant under the circumstances? I have missed a week or two before, but never anything like this. Could my worrying over this matter have kept off my monthly sickness? However, the flow is not like it usually is, and there is some pain which is not usual with me. Do you think I should still come to Joplin and have the work done? I can come if you think it possible that I am in a family way and that I should come under the circumstances. Thanking you for your prompt attention to this matter for me, I am, Yours very truly, Susie Davis."

"Joplin, Mo. Dear Miss Davis: Replying to yours of the 30th inst., will say that you should not be confused by the appearance of a discharge. By all means do not delay your coming as we are losing valuable time. There is no doubt whatever in my mind in regard to the actual condition. However, when I examine you I will be in a position to tell you definitely all about the details. It is not uncommon for women to have a menstrual discharge, which originates from the cervix, in a condition such as yours, and they are sometimes deceived by it. You may be quite positive that worry and anxiety would never cause a delay such as yours. I cannot impress too forcibly on your mind the absolute necessity of prompt action. Assuring you of my best wishes and hoping to see you soon, very truly, M. Luther Spriggs. May 30th, 1912."

The complaint was signed by three physicians of Joplin, Mo., who describe themselves as the "Board of

Censors of Jasper County Medical Society." Neither of those physicians testified at the trial. The secretary of the State Board of Health testified that several physicians of Joplin, Mo., had told him that appellant had the reputation of being a criminal abortionist. Four physicians residing at Joplin, Mo., and two residing at Galena, Mo., testified that appellant had been practicing medicine in Joplin for about ten years, that they were quite intimately acquainted with him, and that his reputation was of the very best. They also testified that he was a very skillful surgeon; that a large part of his professional work consisted in performing operations upon patients brought to him by other doctors. He had operated upon one of the physicians who gave evidence in this cause, and upon the wife of another of said witnesses. The evidence of all six of these witnesses was very laudatory of the personal character and professional ability of appellant. They had never heard of him being suspected of committing criminal abortions until this proceeding was instituted. It is conceded by the respondents that "Susie Davis" had no real existence, and that her name was simply used by the post office inspector in carrying on the correspondence with appellant hereinbefore set out.

W. T. Nardin, of St. Louis, and Howard Gray and McReynolds & Halliburton, all of Carthage, for appellant. John T. Barker, Atty. Gen., and W. T. Rutherford, Asst. Atty. Gen., for respondents.

BROWN, P. J. (after stating the facts as above). I. The theory of respondents is that the letters introduced prove that appellant offered to commit the crime of criminal abortion upon the mythical "Susie Davis"; in other words, that he was possessed of evil thoughts, or a willingness to commit crime, and therefore his license to practice medicine and surgery should be revoked.

Statute. The statute under which the Board of Health suspended the appellant is as follows: "The Board may refuse to license individuals of bad moral character, or persons guilty of unprofessional or dishonorable conduct, and they may revoke licenses, or other rights to practice, however derived, for like causes, and in cases where the license has been granted upon false and fraudulent statements, after giving the accused an opportunity to be heard in his defense before the Board as hereinafter provided. Habitual drunkenness, drug habit or excessive use of narcotics, or producing criminal abortion, or soliciting patronage by agents, shall be deemed unprofessional and dishonorable conduct within the meaning of this section, but these specifications are not intended to exclude all other acts for which licenses may be revoked." Section 8317, R. S. 1909. That portion of the statute upon which the action of the respondents in finding appellant guilty of dishonorable and unprofessional conduct must be sustained, if it can be upheld at all, is found in the last three lines before quoted, and is as follows: "But these specifications are not intended to exclude all other acts for which licenses may be revoked."

Concretely stated, the contentions of appellant are: (1) That the evidence does not prove that he offered to commit the crime of abortion; (2) that if it were satisfactorily proven that he offered, or was willing, to commit said crime, the statute does not authorize the State Board of Health to revoke his license or suspend him from the practice of medicine and surgery, because he merely possessed a desire to do a dishonorable and unprofessional act.

[1] II. *Rights of Appellant.* To properly dispose of the issues we must consider the nature of the right which appellant held as a practicing physician. Is it a

mere privilege? Is it a vested right? Is it property? Some of the authorities cited by respondents hold that a license to practice a profession is not property, and not a right at all, but only a privilege which the state may withdraw without the formality of a trial, and without a compliance with the constitutional guarantees (section 10, art. 2, Constitution of Missouri) which protect persons, property and character. *State ex rel. v. Goodier et al.*, 195 Mo. loc. cit. 560, 93 S. W. 928. I am impressed with the idea that a more logical and rational view was announced by the members of division 1 of this court in the recent case of *State ex rel. Shackelford v. McElhinney*, 241 Mo. loc. cit. 606, 145 S. W. 1139, wherein it was held that the right of a licensed attorney to practice law is "a valuable property right." By analogy, it must be admitted that if the right of an attorney to practice law is a property right, then the duly licensed physician had a property right, protected at least by such safeguards as the Legislature has thrown around it. It is not a mere shadowy privilege which may be revoked regardless of whether the possessor has violated the laws of the state. By what we have said it should not be inferred that we desire to overrule the *Goodier Case*. It is not necessary to disturb that decision in order to reach a correct conclusion in this case. We approach the solution of this case with the understanding that the appellant, through his license to practice medicine, and through his ability and industry, has become possessed of at least a valuable privilege—perhaps a property right, which has been suspended by the action of the respondents for his alleged violations of the laws of this state.

[2, 4] III. *Penal Law*. The next preliminary question which arises in the case is: Shall that part of section 8217, *supra*, which authorizes the Board of Health to revoke licenses of physicians, be adjudged a remedial or a penal statute? If remedial, it must be liberally construed in behalf of both respondents and appellant, while, if it be a penal law, it must be strictly construed against the respondents, as the representatives of the state, and liberally construed in favor of appellant. *State v. Balch et al.*, 178 Mo. 392, 77 S. W. 547; *State v. Kooock*, 202 Mo. loc. cit. 235, 100 S. W. 630; and *State v. McMahon*, 234 Mo. loc. cit. 614, 137 S. W. 872. This rule is announced in *Lewis' Sutherland, Statutory Construction*, vol. 2 (2d Ed.) § 531: "Among penal laws which must be strictly construed, those most obviously included are all such acts as in terms impose a fine or corporal punishment under sentence in state prosecutions, or forfeitures to the state as a punitive consequence of violating laws made for the preservation of the peace and good order of society. But these are not the only penal laws which have to be so construed. There are to be included under that denomination also all acts which * * * take away or impair any privilege or right. A statute which provides for the disbarring of attorneys has been held to be a penal law. *Moutray v. People*, 162 Ill. 194, 44 N. E. 456. A penal statute is construed with a degree of strictness commensurate with the severity of the penalty it imposes, and where the penalty, as in this case, is onerous, no one can be held to have violated its provisions unless his acts come within both the letter and the spirit of the law. *Lewis' Sutherland, Statutory Construction*, vol. 2, §§ 520, 521; *State ex inf. v. Railroad*, 238 Mo. 605, loc. cit. 612, 142 S. W. 279. All laws, however, must receive a rational, and not an arbitrary, construction. Upon the well-considered precedents we have no hesitation in holding that the law now in judgment, in so far as it authorizes the revocation of licenses of physicians, is highly penal, and must be treated as a penal law.

[5, 6] IV. *Hearsay Evidence*. Coming back to the facts in this case, we find no existence in the brief of the honorable Attorney General, that the conviction and suspension of appellant can be sustained on the advertisement which the appellant published in a newspaper, or upon the evidence of Dr. Hiller to the effect that several physicians of Joplin had told him that appellant bore the reputation of being a criminal abortionist. It would certainly have been an insult to the intelligence of the age to contend that a judgment could be sustained on the mere hearsay evidence of Dr. Hiller, which ought not to have been admitted or considered by respondents.

V. *Evidence*. This leaves for our consideration the letters between the appellant and the mythical "Susie Davis." It will be observed that appellant did not directly offer to perform an abortion upon "Susie," though the letters written to him were cunningly worded and designed to make it appear that if he agreed to treat her at all he was willing to commit that crime. There is no expert medical testimony before us which tends to explain whether the symptoms narrated in the letters indicated the presence of a living foetus, a dead foetus, or some ailment of the womb or genital organs. The writer of the letter, after describing "her" symptoms does not say that she is pregnant, but only that she fears she is pregnant. If the symptoms detailed in the letters indicated the presence of a dead foetus, then the replies which appellant made to said letters would not point to an evil purpose or a willingness on his part to commit criminal abortion. The appellant proved such an excellent reputation by his neighbors—physicians who knew him intimately—that if the letters could have been construed so as to be consistent with an innocent purpose, the Board of Health, being honorable men and learned in the medical science, would certainly have given him the benefit of the doubt and acquitted him. The fact that they found him guilty must, under the evidence in this case, be taken by us to mean that the symptoms and conditions narrated in the *Davis* letters unmistakably pointed to the existence of a living foetus, which it would have been a crime to remove or destroy.

[7, 8] VI. *Construction of Statute*. This brings us to the application of the statute to the facts proven. Did the General Assembly, by the enactment of section 8317, S. R. 1909, mean to designate a mere willingness to commit the crime of abortion as dishonorable and unprofessional conduct? We may gain some light on this point by a close consideration of the specific acts designated as unprofessional conduct.

There is a well-recognized rule that where a law specifically designates several matters or things which shall be governed by its provisions, and then by general language undertakes to include other acts and things not specifically named, such law must be so construed as to apply only to things or acts of the same general nature as those definitely set out. *City of St. Louis v. Kaime et al.*, 180 Mo. 309, 79 S. W. 140, and *State ex rel. v. Berryman*, 142 Mo. App. 373, 127 S. W. 129. This is but the restatement of a rule of common sense and everyday experience of mankind. When a man is speaking only of bonds and promissory notes, his mind is not supposed to be dwelling on wagons and threshing machines, and we do not apply his words uttered on that occasion to any such subjects. If a man speak of wild animals, his mind is not likely at the selfsame time to dwell upon domestic animals, and it would be silly to give his words such a construction.

The General Assembly cannot enact a valid law without the minds of its members considering the things to which the law is to apply, for the legislative

will is what becomes the law. In a broad general sense we discern the legislative will by the words it has spoken through its enactments, the same as we would interpret the language of an individual.

Applying this well-known and simple rule to the statute now under consideration, we find that "habitual drunkenness, drug habit, or excessive use of narcotics" are declared dishonorable and unprofessional conduct; likewise, "producing criminal abortion or soliciting patronage by agents" are placed in the same category. The first three specifications, it will be observed, grow out of acts of a physician which tend to weaken or destroy his mind and render him mentally incapable of properly applying his medical skill. The second two specifications pertain to acts which are by the Legislature deemed sufficient grounds for revoking a license. It will further be observed that all five of the specifications named grow out of intentional affirmative acts, not a mere contemplation or willingness to perform wrongful acts. The general specification then follows: "But these specifications are not intended to exclude all other acts for which licenses may be revoked." It will thus be seen that the lawmakers, after having particularly designated certain mind-destroying habits and certain wrongful acts for which the license of a physician may be revoked, undertook to designate generally that there are other acts which may justify such revocation. To my mind, it is clear that the general specification cannot be applied to mere evil thoughts or a consent to do wrong where no wrong is actually done. It could not logically be urged that a mere desire or willingness to use intoxicants or narcotics excessively would impair the mind; and for the same reason it must be held that a mere consent to perform an abortion would not make the appellant an abortionist, or subject him to the penalties of having committed that crime. The general specification of the statute in judgment is directed solely against certain undesigned acts, not against evil thoughts or a willingness to perform wrongful acts.

As we have said, the statute in judgment is highly penal and cannot be expanded or enlarged beyond its letter or spirit. Consequently, it does not support the action of respondents in revoking appellant's license. We have been taught that a mere desire to do wrong is as great a sin as the act of doing wrong itself. That rule will be all right when the Creator sits as Judge, but mere courts and boards of health have not the capacity to search out and correctly weigh the many impulses which enter the human mind. For that reason the state concerns itself mostly about wrongful acts, not evil thoughts, and its agents and administrative boards must be governed accordingly. No one can be deprived of any right or privilege because his mind has been contaminated by evil thoughts, unless the statute has denounced said evil thoughts in plain terms. However reprehensible it may be for a physician to entertain a desire to commit abortion, his license cannot be revoked unless by a written statute his evil desires are made a ground for subjecting him to that penalty.

Our learned Attorney General earnestly insists that it was impossible for the General Assembly to designate the numerous acts and things which would constitute "dishonorable and unprofessional conduct" on the part of physicians, and that therefore the general specification in section 8317, *supra*, should be construed to include all acts (and, inferentially, all wicked thoughts and evil desires) which, by "common judgment," are found to be dishonorable. He cites in support of this contention: *People v. Apfelbaum*, 251 Ill. loc. cit. 22, 95 N. E. 995; *Berry v. State* (Tex. Civ. App.) 135 S. W. 631; *Morse v. State Bd. Med. Ex.*, 57 Tex. Civ. App. 93, 122 S. W. loc. cit. 448; *Spurgeon v.*

Rhodes, 167 Ind. loc. cit. 11, 12, 78 N. E. 228; and *Wolf v. State Bd. Med. Ex.*, 109 Minn. 360, 123 N. W. 1074. The authorities cited tend to support the contention of respondents. The attorneys for the appellant, with equal industry, have cited the following cases which tend to sustain their insistence that the general specification in section 8317, *supra*, is void for uncertainty: *Mathews v. Murphy* (Ky.) 63 S. W. 785, 54 L. R. A. 415; *Ex parte McNulty*, 77 Cal. 164, 19 Pac. 237, 11 Am. St. Rep. 257; *Hewitt v. Board of Medical Examiners*, 148 Cal. 590, 84 Pac. 39, 3 L. R. A. (N. S.) 896, 113 Am. St. Rep. 315, 7 Ann. Cas. 750; *Czarra v. Board*, 25 App. D. C. 443; and *Ex parte Jackson*, 45 Ark. 164. In view of the conflicting opinions of respectable courts on this proposition, we will quote what is said by the learned commentators of Cyc.: "The grounds commonly designated by the statute upon which the medical board is authorized to revoke a physician's license or certificate are unprofessional, dishonorable or immoral conduct. Unprofessional or dishonorable conduct is not defined by the common law, and what conduct may be of either kind is a matter of opinion only. For this reason it has been held in several cases that such a statute is void for uncertainty. Similar statutes have been construed in other jurisdictions without the question of validity being raised, the courts merely considering what can be deemed unprofessional, dishonorable or immoral conduct." 30 Cyc. p. 1555 (B).

There is such a great divergency in judicial thought on this subject that, after reading it all, we find ourselves groping in a wilderness of confusing precedents. In considering precedents it is usually safest to keep any eye on the rules of common sense, which often prove a safer guide than hair-splitting judicial reasoning. We do not take judicial notice that doctors are more willing to commit crimes than men of other professions. Physicians are usually people of intelligence, with a high sense of the duties and responsibilities of good citizenship. We are therefore unwilling to believe that the physicians of our state, or any of them, are guilty of such a multiplicity of wrongful acts that their conduct may not safely be regulated by a single legislative enactment. By section 4739, R. S. 1909, it is made a crime to offer for sale any secret drug designed to prevent conception, and it would be the rankest folly to say that it would have been more difficult to prohibit physicians from offering to commit abortions than it was to prohibit persons from offering for sale obnoxious drugs. We therefore hold that it would have been possible for the General Assembly to designate the particular offenses for which they intended that the licenses of physicians might be revoked.

[9] Another theory of the Attorney General is that the general specification in section 8317, *supra*, must be construed to authorize the Board of Health to determine what shall constitute dishonorable and unprofessional conduct. This point does not deserve serious consideration. To grant the Board of Health that power would be to concede that it has the right to enact from time to time such laws as it deems necessary to regulate the conduct of physicians and surgeons. We give the honorable members of the Board of Health credit with possessing too much good judgment to attempt to assume the rule of lawmakers.

[10] If section 1, art. 4, of the Constitution of Missouri, vesting in the General Assembly the power to make laws, and article 3 of said Constitution, prohibiting executive officers from performing legislative functions, could both be suspended, and the Board of Health given power to legislate, the respondents would be in no better condition, so far as the facts of this case are concerned. It nowhere appears in this record that prior to the institution of this action to revoke

appellant's license the State Board of Health had ever enacted, or pretended to prescribe, a law or rule prohibiting physicians from offering to commit abortions. The General Assembly is prohibited from giving its enactments retrospective effect, and if we concede legislative powers to the Board of Health (which we do not) that Board would have to be governed by the same constitutional limitations. Section 15, art. 2, Constitution of Missouri.

The action of the State Board of Health in suspending the appellant from the practice of medicine and surgery should be quashed and for naught held, and the judgment of the circuit court of St. Louis City sustaining and upholding the action and finding of the Board of Health should be reversed. It is so ordered.

WALKER and FARIS, JJ., concur.

MEMBERS OF THE STAFFS OF THE ST. LOUIS HOSPITALS

The following have been appointed on the visiting staffs of the city hospitals at St. Louis under the new system inaugurated by Director of Public Welfare, Mr. Emil Tolkaz:

City Hospital, Washington University Selections—Medicine, Drs. George Dock, Albert E. Taussig, Jerome Cook, Walter Fischel; genito-urinary, William Robertson, H. McClure Young; orthopedics, Archer O'Reilly, C. A. Stone; stomatology, John H. Kennerly; neurology and observation, M. A. Bliss; obstetrics and gynecology, Henry Schwarz, George Gellhorn, Fred J. Taussig; eye service, Meyer Wiener, Julius H. Gross; dermatology, M. F. Engman, W. H. Mook; surgery, Fred T. Murphy, A. O. Fisher, Robert Schlueter, W. C. G. Kirchner, C. E. Hyndman; ear, nose and throat, W. E. Sauer; pediatrics, B. S. Veeder, T. C. Hempelmann, A. S. Bleyer.

St. Louis University Selections: Medicine—Drs. Charles H. Neilson, W. P. Elmer, William Engelbach, Samuel Lipsitz; genito-urinary, Cyrus E. Burford, Henry J. Scherck; orthopedics, Alex. E. Horwitz; stomatology, Virgil Loeb; neurology and observation, Charles G. Chaddock, Hillel Unterberg, T. H. Romeiser; obstetrics and gynecology, Hugo Ehrenfest, Percy H. Swahlen; ear, nose and throat, Hanau W. Loeb; dermatology, Joseph Grindon, Theodore Greiner, Robert H. Davis; surgery, M. G. Seelig, W. E. Leighton, W. T. Coughlin; eye service, Carl Barck, Clarence Loeb; pediatrics, James R. Clemens, Ernest L. Coffin.

National University and Open Selections: Medicine, Drs. F. C. E. Kuhlmann, H. J. Cummings, Edwin Schisler, George Richter, L. S. Luton, L. J. Wolfort; genito-urinary, Henry Gettys, H. G. Lund; ear, nose and throat, R. Ph. Scholz, H. E. Miller; dermatology, J. J. Houwink, J. H. Kimbrough; consulting roentgenologists, F. B. Hall, M. B. Titterington; obstetrics and gynecology, A. N. Curtis, John C. Morfit, R. H. Fuhrmann, J. C. Murphy; neurology and observation, Given Campbell, M. W. Hoge, Percy J. Farmer, William L. Nelson; pediatrics, H. A. Uhlemeyer, Julius Rotteck; surgery, Ernest Jonas, Francis Reder, O. H. Elbrecht, E. A. Babler, J. J. Link, Roland Hill; eye service, J. E. Jennings, Max Jacobs; orthopedics, Scott Parsons, E. L. Cooley.

City Sanitarium—Term from Nov. 1, 1914, to Nov. 1, 1916: Medicine, Drs. L. J. Oatman, George W. Koenig, J. J. Singer, Carl A. Hobrecht; eye service, S. J. King, John Green, Jr.; dermatology, C. H. Ball, Alex. S. Wolf; consulting alienists, M. A. Bliss, Charles C. Chaddock; gynecology and obstetrics, William H. Vogt, F. W. Bailey; neurology and observation, Percy J. Farmer, Theodore H. Romeiser,

H. Unterberg, F. M. Barnes, Jr.; Stomatology, J. P. Harper, William O. Appel; surgery, J. W. Shankland, W. J. Doyle; ear, nose and throat, A. F. Koetter, F. C. Simon; consulting neurological surgeons, Ernest Sachs, Louis Rassieur.

City Infirmary: Medicine, Drs. W. C. Mardorf, W. D. Aufderheide, J. C. Salter, William Winter; ear nose and throat, F. G. A. Bardenheier, Will Bostick; gynecology and obstetrics, H. H. Helbing, W. L. Clapper; neurology and observation, Percy J. Farmer, F. M. Barnes, Jr.; dermatology, Senter L. Gettys, C. H. Ball; surgery, W. U. Kennedy, C. W. Gaertner; genito-urinary, Clarence Martin; eye service, E. P. North, C. W. Tooker; stomatology, J. H. Harper, William O. Appel.

Isolation Hospital: Surgery, C. W. Gaertner, W. U. Kennedy; dermatology, J. J. Houwink, Senter L. Gettys; pediatrics, T. C. Hempelmann, P. G. Hurford, P. C. Jeans, T. Wister White, Gustave Lippmann; eye service, E. P. North, G. W. Tooker; ear, nose and throat, C. Armin Gundelach, Herman B. Miller.

Robert Koch Hospital: Medicine, Carl A. Hobrecht, W. D. Aufderheide; ear, nose and throat, E. L. Meyer. Surgical cases sent to the City Hospital.

They began service on November 1 and are appointed for two years. They are subject to the regulations established by the director and may be removed by him at any time.

THE "BIG SIX"

Six Reasons for the Perpetuation of the Proprietary Evil

"The Big Six" is the modest name assumed by the Associated Medical Publishers in describing the half-dozen medical journals that comprise their association. The Associated Medical Publishers is an organization evidently composed of the owners and publishers of the following journals:

American Journal of Clinical Medicine, Chicago: Essentially a house organ for the Abbott Alkaloidal Company. Was established in 1894, its original name being the *Alkaloidal Clinic*.

American Journal of Surgery, New York: Originally established in St. Louis, but when purchased by its present owner, was transferred to New York City. Its owner and managing editor was, previous to the time he purchased the *American Journal of Surgery*, advertising manager for another surgical journal. He still is, essentially, an advertising man, and is said to act as advertising director of a Massachusetts proprietary house.

American Medicine, Burlington, Vt.: Originally established as a weekly in Philadelphia. When purchased by its present owner, it was changed to a monthly, and the place of publication transferred to Burlington, Vt., although its principal offices are in New York City. Its present owner and managing editor conducts an advertising agency that handles a number of proprietary medicine accounts.

Interstate Medical Journal, St. Louis: Practically owned and controlled by a physician who conducts an advertising agency which handles, or has handled, a number of advertising accounts of proprietaries.

Medical Council, Philadelphia: Was established in 1895 and is at present owned and controlled by the widow of its founder.

Therapeutic Gazette, Detroit: Essentially a house organ for Parke, Davis & Company and is published by the general manager of this company.

The Associated Medical Publishers under the caption "Big Six" published the following advertisement early this year:

"A banner year is ahead for those firms who plan to develop the patronage and support of the medical profession for their products. Never were the opportunities greater, or the prospects brighter, for enlisting the aid of medical men in successful merchandising of pure foods, sanitary supplies for the home, school or public institution, hygienic clothing and foot wear, automobiles and automobile accessories, and high grade specialties in general appealing to the physician personally, or in his professional capacity.

"Through the services of 'The Big Six' reputable firms can secure for products of established merit, the favorable attention of over 100,000 of the country's foremost physicians.

"Certainly no other way of reaching the physician is so effective and economical as the use of advertising space in these recognized high-class journals. Owing to their standing and the fact that medical men preserve them indefinitely for repeated reference, they give a sustained service that is possible by no other class of publications.

"If you have something of real merit to introduce to American doctors, do not fail to investigate 'The Big Six.' It has paid others and paid them well, it will pay you."

An advertisement for the *Interstate Medical Journal* says in part:

"Here is a journal for the busy, thinking men of the profession who demand authoritative and timely journalistic service."

And the publishers of the *American Journal of Clinical Medicine*:

"*Clinical Medicine* is the great therapeutic journal. It is not intended for specialists and theorists. It is intended for general practitioners. Every number, every page, every line is selected with that point in view, to give you all the help we possibly can. You need it, let us show you why."

The owners of the *Therapeutic Gazette* tell the medical profession that they regard each subscription as a contract with the physician to furnish him monthly with seventy-six pages of the most reliable information that can possibly be collected on the subject of therapeutics.

"Guarding your rights along these lines as carefully as we do, we beg of you to read the announcements of our advertisers, and favor them with inquiries and requests for samples; and when so doing, please be so kind as to mention having seen the advertisement in the *Therapeutic Gazette*."

Of the *Medical Council*, we learn that:

"Its pages are filled with scientific material of that brief concise, practical character so easily assimilated and so very helpful in the physician's every day work. Especial attention is devoted to the business side of the physician's life. To the busiest, most prosperous physicians *Medical Council* has become indispensable. No journal in America is more conscientious concerning the character of its advertising pages than *Medical Council*."

In fairness to the *Medical Council* it should be said that this publication has, during the past six or eight months, purged its advertising pages of many of the more objectionable products. It is understood that further deletions are under consideration.

How careful the owners and editors of the "Big Six" journals are to present authoritative information in their advertising pages is evidenced by the accompanying list showing some of the medicinal articles advertised in recent, 1914, numbers of these six ostensibly high-principled medical journals. Many of the articles included in this list can safely be classed with the more obnoxious nostrums of the "patent medicine" type and like the latter class are, in many instances, simple frauds, the sale of which should not be tolerated.

How closely the method of advertising these several preparations simulates that adopted by the manufacturers of "patent medicine" is evidenced by the fact that within the past year the assertions made in many of the advertisements have materially changed and the statement that the preparation is "an efficient remedy" in place of "a positive cure" is now generally used. To be somewhat more impressive the manu-

facturers frequently utilize the assertion that their preparation "seems to exert an almost specific effect" or the equally misleading statement, "no remedy at the command of the profession is more valuable than" the preparation under discussion. Not infrequently the advertiser also adds the additional promise that his preparation "will not disappoint you."

A careful study of the accompanying list ought to convince the thoughtful practitioner that many if not all of the nostrums advertised in these several journals are fully as objectionable as those advertised in

SOME NOSTRUMS ADVERTISED IN THE "BIG SIX"

Nostrums	Therapeutic Gazette	American Medicine	American Journal of Clinical Medicine	Interstate Medical Journal	Medical Council	American Journal of Surgery
Aletris Cordial.....	..	+	..	+	+	+
Anasarein.....	+	+	+	+	+	+
Angier's Petroleum Emulsion.....	..	+	..	+	+	+
Antiphlogistine.....	+	+	..	+	+	+
Betul-ol.....	+	+	..	+	+	+
Bronidia.....	+	+	+	+	+	+
Burnham's Soluble Iodine..	+	+	+	+	+	+
Cactina Pillets.....	+	+	+	+	+	+
Campho-Phenique.....	+	+	+	+	+	+
Celerina.....	+	+	+	+	+	+
Chionia.....	+	+	+	+	+	+
Citrolax.....	+	+	+	+	+	+
Colebi-Sal.....	+	+	+	+	+	+
Crotalin.....	+	+	+	+	+	+
Cystogen Aperient.....	+	+	+	+	+	+
Dermatone.....	+	+	+	+	+	+
Droviburnia.....	+	+	+	+	+	+
Ergoapiol.....	+	+	+	+	+	+
Fellows' Syrup of the Hypophosphites.....	+	+	+	+	+	+
Formamin.....	+	+	+	+	+	+
Gastrogen Tablets.....	+	+	+	+	+	+
Glyco-Heroin.....	+	+	+	+	+	+
Glyco-Thymoline.....	+	+	+	+	+	+
Gray's Glycerine Tonic..	+	+	+	+	+	+
H-M-C (Abbott).....	+	+	+	+	+	+
Hayden's Viburnum Compound.....	+	+	+	+	+	+
Micajah's Wafers.....	+	+	+	+	+	+
Neurosine.....	+	+	+	+	+	+
Noitol.....	+	+	+	+	+	+
Palpebrine.....	+	+	+	+	+	+
Papine.....	+	+	+	+	+	+
Pasadyne.....	+	+	+	+	+	+
Peacock's Bromides.....	+	+	+	+	+	+
Pepto-Mangan (Gude).....	+	+	+	+	+	+
Phenalgin.....	+	+	+	+	+	+
Protonuclein and Protonuclein Beta.....	+	+	+	+	+	+
Prunoids.....	+	+	+	+	+	+
Resinol.....	+	+	+	+	+	+
Respirazone.....	+	+	+	+	+	+
Sanmetto.....	+	+	+	+	+	+
Secretogen.....	+	+	+	+	+	+
Sedobrol Roche.....	+	+	+	+	+	+
Seng.....	+	+	+	+	+	+
Three Chlorides (Henry)....	+	+	+	+	+	+
Tri-Iodides (Henry).....	+	+	+	+	+	+
Tropronine.....	+	+	+	+	+	+
Unguentine.....	+	+	+	+	+	+

the daily press and will further convey the rather sorrowful conviction that until a distinct majority of the "100,000 of the country's foremost physicians," who are said to be subscribers to these journals, will devote themselves to the best that is in their profession, we have little or no right to expect that the public at large will believe us to be less gullible than the most unsophisticated layman or that our opinion regarding any one nostrum is not influenced by our interest, direct or indirect, in one or more of the other secret or semi-secret preparations that are equally bad.—*Journal American Medical Association.*

SOCIETY PROCEEDINGS

PROCEEDINGS OF THE WASHINGTON UNIVERSITY MEDICAL SOCIETY'S FIFTEENTH MEETING

Washington University Hospital, Oct. 12, 1914

25. PRESENTATION OF A CASE OF HEART-BLOCK.—By DR. G. CANBY ROBINSON

The patient, a man of 57, gave a typical history of heart-block with a pulse-rate usually between 30 and 40 per minute. The venous pulse tracings showed that an incomplete dissociation was present when first seen and the tracings and electro-cardiograms later indicated complete auriculo-ventricular dissociation. There was a definite history of syphilis and a positive Wassermann reaction was obtained.

The patient had many attacks of unconsciousness and convulsions lasting one or two minutes, during the first month under observation, but none have occurred during the last seven months. Electro-cardiographic studies showed that the syncopal attacks occurred when complete auriculo-ventricular dissociation was present, but there was marked ventricular arrhythmia, the auricles beating regularly. During the attacks ventricular stoppages lasting at times thirty-five seconds were observed.

Electro-cardiograms obtained during vagus stimulation by pressure showed that the auricular rate alone was slowed, the ventricular rate remaining unchanged. When atropin was administered only the auricular rate became accelerated through vagus paralysis. Antisyphilitic treatment has had no apparent influence on the cardiac mechanism.

The case demonstrates that the auricular rate alone is under vagus control in complete auriculo-ventricular dissociation, the ventricular rate being uninfluenced by the vagi. It also shows that the syncopal attacks of the Adams-Stokes syndrome may occur after complete dissociation has been permanently established, and changes from incomplete to complete dissociation are not necessary for their production.

26. REPORT OF A CASE OF MULTIPLE SCLEROSIS IN WHICH A DIAGNOSIS OF CEREBELLAR CYST WAS MADE AND FOR WHICH AN OCCIPITAL DECOMPRESSION WAS DONE

By Drs. SIDNEY I. SCHWAB, ERNEST SACHS AND
L. B. ALFORD

Patient a boy of 15 years of age. It was noticed about a year ago that patient acted strangely; that he would sit about and watch other children playing instead of taking part himself. On July 7, 1913, he was treated at another hospital and a lumbar puncture was done. Immediately after the boy became unconscious, lost his power of speech and was unable to walk. In this condition he was sent to the wards of the Washington University Hospital.

Patient yawns at intervals. Slight spasmodic contraction of corners of mouth, especially right frontalis. Automatic movement of jaw. Isolated spasmodic contraction of fingers of right hand. Intelligence fairly well preserved. Cannot express himself, owing to difficulty in speech. Lies with head slightly turned to left. Speech is nasal and scanning. Speech defect caused by distinct weakness of soft palate. An intention tremor of the lips, tongue and head. Patient cannot sit up. When he is supported in a sitting position he shakes from side to side and right arm moves in quick choreiform movements. All attempts at volitional movements are accompanied by intentional tremors and associated movements in neighboring muscle groups. The gross muscular

strength of the right hand 10 per cent. of normal, the left less. Movements of right arm accompanied by marked ataxia and uncertainty and with each muscle group overacted. Same condition found in both legs, left is obviously more affected than the right. Pupils are small, left is slightly larger than right. Reaction as to light and accommodation fairly prompt. Nystagmus. Ophthalmoscopic: Both disks are pale. Degeneration of choroid immediately surrounding disks. Secondary atrophy of both nerves, more advanced in right. Sugar test negative. Roentgen ray negative. Roentgen ray wrist and fingers normal. Examination of ears shows no important findings. Wassermann of blood is negative. Urine and blood unimportant. Blood-pressure 100 to 110.

The lesion in this case was interpreted as a slow growing process, located in the cerebellum causing no important increase of intracranial pressure. This conclusion is supported by the absence of headache, and the slight atrophy of disks. The chief symptoms are cerebellar; the distribution is bilateral. Ataxia more in evidence in the right, and the muscular insufficiency more marked on the left. On account of the age of the patient the absence of typical ocular symptoms and other findings, multiple sclerosis was excluded as the probable diagnosis.

It may be interesting to consider on what facts we based our diagnosis and our surgical procedure. In the first place, the characteristic eye symptoms of multiple sclerosis were absent, pallor of the temporal field, and then the collapse following lumbar puncture was interpreted as evidence of pressure in the posterior fossa. The marked tuberculin reaction with the mental symptoms associated with it seemed to confirm this idea. A case with almost identical symptoms which we had operated on some months ago, no doubt also influenced us a good deal. In that case there was a bilateral cerebellar cyst.

DR. L. B. ALFORD: The anatomical diagnosis in this case is as follows: Operation wound (recent) of occipital region; multiple sclerosis of brain and cord; acute tubular nephritis; edema and congestion of lungs; acute bronchitis; emaciation.

The dura is normal. The pia is everywhere transparent and glistening. Section of the brain and cord after fixation in formalin disclosed isolated round or oval grayish areas irregularly distributed through all parts of the nervous system. In the brain these vary in size from 1 mm. to 1 cm. and generally lie in the white matter but when situated near the cortex or some of the basal nuclei extend for a short distance into the gray matter. From six to twelve plaques may be counted in a cross section of the cerebrum. No tendency to softening can be made out. In the cord the plaques are easily recognized and are numerous in the cervical and dorsal regions. Where a longitudinal section has been made the upper and lower limits are easily made out. The dorsal and postero-lateral columns are most frequently involved but in several sections the antero-lateral portion contains plaques.

For microscopical study we employed sections stained differentially for myelin sheaths, neuroglia and acute degeneration of nerve fibers as well as by the more common methods. In all plaques the myelin sheaths have disappeared, being replaced by a dense network of neuroglia fibers. Among the latter and more especially near the periphery of the plaques are numerous spider cells. The blood-vessel walls are not thickened and the number of capillaries is not increased. A perivascular infiltrate consisting of lymphocytes and a few large mononuclear phagocytes is the conspicuous vascular lesion. System degeneration is absent in Weigert stains. Marchi preparations reveal an acute degeneration in one pyramidal tract and evident only in the cervical region. Stains for axis cylinder processes have not been made but that they extend

through the lesion is evidenced by the absence of tract degeneration with the one exception already noted. For this degeneration and for the vascular lesion, no cause can as yet be assigned.

27. THE INFLUENCE OF DIET ON NECROSIS CAUSED BY HEPATIC AND RENAL POISONS.—By DRs. EUGENE L. OPIE AND LELAND B. ALFORD

The effect of diet on the toxicity of two substances, namely chloroform and phosphorus, capable of causing necrosis of the liver, has been studied and a similar investigation of two substances which cause necrosis of renal tubules, namely potassium chromate and uranium nitrate, has been made. All of these substances are more toxic for animals which have received a diet of meat than for those which have received a diet consisting in great part of carbohydrate (oats and cane sugar).

Carbohydrates protect the parenchymatous cells of the liver or of the kidneys from necrosis caused by any one of these substances.

Chloroform is much more toxic to animals which have received a diet consisting in great part of fat than to those which have received meat. When fat is fed (to the white rat) fatty infiltration occurs in the centers of the hepatic lobules and in the loops of Henle of the kidney. The necrosis caused by chloroform has the same location. The solubility of chloroform in fat determines the increased susceptibility of animals which have received fat and stored it in the parenchymatous cells of the liver and kidney.

Susceptibility to intoxication with phosphorus which causes fatty degeneration and necrosis of the liver is not increased by a diet of fat. Necrosis caused by phosphorus occurs in the periphery of the hepatic lobule and exhibits maximum intensity in animals which have received meat.

Susceptibility to intoxication with potassium chromate which causes nephritis with necrosis of the convoluted tubules of the kidney is not greater after a diet of fat than after a diet of meat.

Susceptibility to intoxication with uranium nitrate which causes nephritis with advanced necrosis of renal tubules is increased by a diet of fat. The loops of Henle, in which fat is abundant after a diet of fat, are the chief sites of necrosis.

28. ENDOTHELIAL TISSUE AND HEMATOGENESIS. I. THE MESAMEBOID CELL CLUSTERS IN THE DORSAL AORTA.

—By DR. VICTOR E. EMMEL

In the course of a study of several regions of the mammalian vascular system with reference to the question whether normally or otherwise endothelial tissue ever gives rise to morphological elements of the blood at any stage in the life history of the organism, subsequent to the formation of the area vasculosa, the following observations were made on the dorsal aorta of pig embryos. The material studied consisted of about seventeen pig embryos varying from 6 mm. to 25 mm. in length, together with several mouse and rabbit specimens. In the dorsal aorta of the 6 mm. to 15 mm. pig embryos there occur rounded cell masses or clusters, the cytological characteristics of which identify the component cells as belonging to the mesameboids of Minot, or the primitive lymphocytes of Maximow. Their constancy in occurrence at certain stages of development, their more or less firm attachment to the vascular surface, and their restriction without exception to the ventral wall of the aorta, demonstrate that these clusters are not merely agglutinated cell masses incidentally resting on the aortic wall. On the contrary, the absence of endothelial continuity at the basal regions of these clusters, the transitional cytological characteristics from the

basal to the more peripheral cells, the changes in form and increase in number and size of the endothelial nuclei, together with the frequent occurrence mitotic figures within the masses, is evidence strongly indicative of their proliferation in situ from the aortic endothelium—a conclusion the important bearing of which on the angioblast theory of His is readily appreciated. The further question arises as to the possible correlation of these structures with any special developmental processes. Without giving the detailed data, it may be stated that these clusters are greatly reduced in numbers at the 15 mm. stage, and have disappeared entirely at the 25 mm. stage. During this period there occurs in the ventral region of the aorta, in contrast to the dorsal region, not only an extensive degeneration of the medial and lateral intersegmental aortic arteries, but also a remarkable "caudal wandering" of the coeliac and mesenteric arteries on the aortic wall, a migration which may involve as much as ten segments. The simultaneous appearance of these phenomena in the ontogeny of the embryo and the morphological interrelationship of the structures under consideration in the ventral aortic wall are of such a character as to be suggestive of a significant correlation between the formation of the clusters and the development of the permanent visceral arteries of the adult.

NORTHEAST MISSOURI MEDICAL ASSOCIATION

The Northeast Missouri Medical Association, comprising the Fifth and Sixth Councilory Districts, counties of Schuyler, Scotland, Clark, Adair, Knox and Lewis, held its first session at Memphis, Wednesday, October 7, with about twenty physicians present.

A paper on Medical Organization was read by Dr. H. E. Dunlop of Memphis.

Dr. C. F. Frame of Ewing, read a paper on Medical Ethics.

Dr. J. L. Statler of Granger, read a paper on Heredity.

Two other highly interesting papers were read by Drs. A. E. Platter, on Concealed Uterine Hemorrhages, and G. F. Foster on Mental Blindness.

The society was very much entertained by a paper read by Mayor F. C. Millspaugh of Canton, entitled "The Doctor from the Standpoint of the Doctor." It contained many good points and much pungent wit which was appreciated.

Altogether a very pleasant and instructive afternoon was spent, after which the visiting doctors were invited to supper at the McKinney Hotel.

The election of officers resulted as follows:

President, C. F. Frame, Ewing; first vice-president, P. M. Baker, Memphis; second vice-president, A. C. Crank, Canton; secretary-treasurer, J. S. Gashwiler, Novinger; committee on constitution and by-laws, E. C. Callison, B. B. Parrish and J. W. Martin; committee on program, H. E. Dunlop and E. E. Parrish.

J. S. GASHWILER, M.D., Secretary.

SOUTHEAST MISSOURI MEDICAL SOCIETY

The Southeast Missouri Medical Society held its thirty-eighth semi-annual meeting at the City Club rooms in Sikeston, Tuesday, October 20, 8 p. m.

The meeting was called to order by the president, C. A. Anthony of Fredericktown. Rev. C. Burton of Sikeston delivered the invocation. The Hon. Ralph E. Bailey of Sikeston welcomed the members; he was responded to by Dr. U. P. Haw of Benton. The president's annual address by Dr. W. H. Westcoat of Oran was most interesting and instructive. The appointment of committees followed, after which a smoker was given by the local profession.

Wednesday, 8:30 a. m., the Program Committee reported as follows:

"Presentation of Skiagraph; Dislocation of Shoulder with Fracture of Humerus," by U. P. Haw, Benton.

"Recent Observations of Hospitals for Insane in Other States," by G. E. Scrutchfield, Farmington.

"Tonsillitis," by W. K. Statler, Oak Ridge.

"The Ear," by J. W. Mott, Poplar Bluff.

"Presentation of Case of Goiter," by T. V. Miller, Sikeston.

"Surgery of Skin," by A. O. Bondurant, Cairo.

"Charcot Joint," by H. L. Reid, Charleston.

"Causes of Ear Pain," by Eugene Senseney, St. Louis.

"Nutritional Problems of Infancy and How Met," by J. H. Timberman, Marston.

"Ample Drainage in Prostatectomy," by W. H. Wescoat, Oran.

E. J. Goodwin, St. Louis, secretary of the State Medical Association, gave a talk on the benefits of organization, to which all the members listened with appreciative interest. A general discussion followed the talk, in which was brought out many problems that touch the physician in his daily work.

Following Dr. Goodwin's address the society adopted resolutions urging United States District Attorney Oliver at St. Louis to continue prosecution of advertising doctors.

The society voted its thanks to the local profession for the splendid entertainment they received while in the city of Sikeston.

The society adjourned to meet at Fredericktown the first Tuesday in May.

W. S. HUTTON, M.D., Cor. Sec'y.

BUCHANAN COUNTY MEDICAL SOCIETY

The Buchanan County Medical Society held its regular meeting at St. Joseph, Dr. J. J. Bansch, president, presiding. There were thirty members present. The minutes of the previous meeting were read and approved.

A letter from Mayor Elliott Marshall was read in regard to Dr. Gebhart and on motion a reply was drafted by a committee consisting of Dr. H. R. Forgrave and Dr. C. R. Woodson.

Applications from Dr. S. D. Senor and Dr. Collis I. Roundy were read for the second time and both were elected on regular ballot. The application of Dr. Edward A. Gummig was read for the first time and referred to the censors.

On motion of Dr. W. L. Kenney the executive committee was instructed to investigate the feasibility of obtaining a suitable place of meeting, where the projectoscope could be used to illustrate scientific papers.

Dr. L. S. Long read an interesting paper on "Twilight Sleep at the New York Lying-In Hospital." It was discussed by Drs. W. L. Kenney, R. Willman, A. L. Gray, J. T. Stamey, John Doyle, C. R. Woodson, C. E. Thomas, Caryl Potter, W. T. Elam and P. I. Leonard; closed by Dr. Levi S. Long.

H. LEE, M.D., Secretary, pro tem.

The Buchanan County Medical Society met at their rooms Wednesday evening, Oct. 7, 1914. Nineteen members were present and the president, Dr. J. J. Bansch, in the chair. The minutes of the previous meeting were read and approved.

The following applications for membership were read for the second time and the applicants were unanimously elected members of our society: Drs. F. G. Beard, E. A. Miller and J. Kangisser.

The following applications for membership received their first reading: Dr. Collis I. Roundy, endorsed by Drs. L. A. Todd and T. E. Potter; Dr.

S. D. Senor, endorsed by Drs. Gleaves and Owens. These applications were referred to the board of censors for investigation and endorsement.

The report of the executive committee on *Gazette* advertising was read. No action was taken.

The following resolution, introduced by Dr. A. L. Gray, was on motion of Dr. Lau and seconded by Dr. Willman adopted, ordered spread on the minutes and a copy sent to Mayor Marshall, the daily press and Dr. O. C. Gebhart.

Resolved, That the members of the Buchanan County Medical Society desire to express their appreciation of the work done by Dr. O. C. Gebhart as president of the Board of Health of the city of St. Joseph, and be it further

Resolved, That we believe Dr. Gebhart has sacrificed his time, money and energy in perfecting his work, and we feel that in view of the above facts our worthy mayor has done Dr. Gebhart a great injustice.

Dr. A. B. McGlothlan read a paper on "Embryology of Visceral Ptosis." It was discussed by Drs. Lau, Owens, Bansch and Elam.

Dr. Charles Geiger's paper on "Treatment of Fractures of Long Bones; Autogenous Bone Graft; Featuring New Instruments," was discussed by Dr. Floyd Spencer; Dr. Geiger closing.

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

CASS COUNTY MEDICAL SOCIETY

The Cass County Medical Society met in Harrisonville, October 8, Dr. M. P. Overholser, vice-president, presiding. The following members were present: Dr. H. Jerard, Pleasant Hill; Drs. A. R. Elder, J. S. Triplett, M. P. Overholser, H. S. Crawford, Harrisonville, and Dr. Jack Brown, Las Animas, Colo., as a guest of the society.

The society had the pleasure of listening to two very interesting papers as follows:

"The Cancer Problem," by Dr. J. S. Triplett; "Thoughts by the Wayside," by Dr. H. Jerard. Both papers were discussed by the members present and the authors were complimented on the excellence of their papers.

Following the scientific program Dr. M. P. Overholser, who had just returned from the meeting of the State and National Society for the Prevention and Control of Tuberculosis, at St. Louis, made a report of the proceedings of that meeting. Representatives of the various literary clubs, newspapers, the ministers, etc., were invited and several were present. The organization of a County Anti-Tuberculosis Society was discussed and a committee was appointed to ascertain the sentiment of the public toward the organization of such a society.

On account of rain and bad roads the members from the surrounding towns were unable to attend; nevertheless, the meeting was a very profitable and interesting one.

H. S. CRAWFORD, M.D., Secretary.

DAVIESS COUNTY MEDICAL SOCIETY

The regular annual October meeting of the Daviess County Medical Society was held in Jameson, the evening of October 6 at the home of the president, Dr. N. M. Wetzel. Before the meeting was called to order, Mrs. Wetzel served the doctors with a six o'clock dinner. A goodly number were in attendance. Those present were Dr. C. R. Woodson of St. Joseph; Drs. Dunham, McClung, Nigh and Coates of Pattonsburg; Dr. Metz of Winston; Drs. Waggner and Hardinger of Civil Bend; Dr. Frazier of Altamont, and Dr. Minnick of Lock Springs.

Dr. Woodson, the visiting physician, addressed the society on Cerebral Hemorrhagic Thrombosis and

Myelitis with special reference to the differential diagnosis between hemorrhagic concussions, alcoholism and morphinism.

Following Dr. Woodson's address the regular program was taken up, the subject being Obstetrics. A number of abnormal cases were reported and a hearty discussion was enjoyed by all. Dr. Metz reported a special hospital ease of spontaneous evolution which created a considerable degree of interest.

The Daviess County Medical Society is growing with interest and enthusiasm and every time a doctor misses one of the meetings he misses an opportunity of refreshing his memory on subjects of great importance, as well as opportunity of taking part in the discussion of new diseases and their treatment.

The next meeting will be held at Jamesport, Tuesday, December 8, at 1 o'clock p. m., at which time the officers for the ensuing year will be elected, also delegates to the State Association meeting and numerous committees will be appointed. A splendid program has already been arranged and every physician is urged to get in trim for the meeting.

M. A. SMITH, M.D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY

The Johnson County Medical Society met in regular monthly session at the Court House in Warrensburg, October 13.

Dr. D. E. Shy of Knobnoster, presented a paper on the subject "Poliomyelitis," and demonstrated the disease by the exhibition of a case in a small boy.

Several matters of interest to the society referable to the Johnson County Round Up to be held November 26, 27 and 28 in the city of Warrensburg, were transacted. Among those of particular interest was the arrangement for the Better Babies Conference which seems to be quite a popular phase of the Round Up.

The society adopted the score cards as authorized by the American Medical Association. The society will hold a public health meeting during the Round Up, at which time papers will be read and discussed which will be of value and interest to the people. At night a public lecture will be given by a national medical lecturer on some topic of public benefit. Another feature of the Round Up which comes within the scope of the society, is a lecture on First Needs of the Sick by one of our local practitioners, with demonstrations given by a trained nurse.

The following resolutions were adopted to become part of the by-laws of our society:

Realizing that the members of the Johnson County Medical Society should for their own benefit and the welfare of the people, and believing that the members of the Johnson County Bar Association would greatly appreciate a change in the manner of rendering medical expert testimony, therefore be it

Resolved, That no member of the Johnson County Medical Society be allowed, under penalty of that prescribed by the constitution and by-laws of the Johnson County Medical Society and the Missouri State Medical Society, for conduct unbecoming to a legalized physician, to render medical expert testimony before the courts, except as appointed by the court for such service and for a fee of not less than twenty-five (\$25) dollars, except in cases where the claimant for damages sues as a poor person and the verdict is rendered in favor of the defendant. Be it further

Resolved, That this action should in no way be construed or interpreted to mean the deprivation of any person or persons from receiving the protection of medical expert testimony when justice demands it.

O. B. HALL, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, 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":

HYPODERMIC TABLETS OF EMETINE HYDROCHLORIDE, MULFORD.—Each tablet contains emetine hydrochloride, 0.016 Gm. H. K. Mulford Co., Philadelphia, (*Jour. A. M. A.*, Oct. 3, 1914, p. 1204).

ACNE VACCINE.—Marketed in boxes of 4 syringes containing 25, 50, 100 and 200 million killed bacilli; also in boxes of 2 syringes containing 50 and 200 million killed bacilli; boxes of 6 ampoules containing 10, 25, 50, 100, 200 and 500 million killed bacilli, with a syringe; and boxes of 2 ampoules containing 50 and 200 million killed bacilli, with a syringe. E. R. Squibb & Sons, New York.

BACILLUS COLI COMMUNIS VACCINE.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed bacilli; also boxes of 2 syringes containing 100 and 500 million killed bacilli and boxes of 2 ampoules containing 100 and 500 million killed bacilli, with a syringe. E. R. Squibb & Sons, New York.

BACILLUS PERTUSSIS VACCINE.—Marketed in boxes of 4 syringes containing 25, 50, 100 and 200 million killed bacilli; also boxes of 2 syringes containing 50 and 200 million killed bacilli; boxes of 6 ampoules containing 25, 50, 100, 200, 300 and 500 million killed bacilli, with a syringe; and boxes of 2 ampoules containing 50 and 200 million killed bacilli, with a syringe. E. R. Squibb & Sons, New York.

PYOCYANEUS VACCINE.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed bacilli; also in boxes of 2 syringes containing 100 and 500 million killed bacilli. E. R. Squibb & Sons, New York.

GONOCOCCUS VACCINE.—Marketed in boxes of 4 syringes containing 100, 200 and 500 million killed gonococci; also in boxes of 2 syringes containing 100 and 500 million killed gonococci; boxes of 6 ampoules containing 50, 100, 150, 350, 500 and 1,000 million killed gonococci, with a syringe; and boxes of 2 ampoules containing 100 and 500 million killed gonococci, with a syringe. E. R. Squibb & Sons, New York (*Jour. A. M. A.*, Oct. 3, 1914, p. 1204).

MENINGOCOCCUS VACCINE, IMMUNIZING.—Marketed in boxes of 3 syringes containing 100, 500 and 1,000 million killed meningococci. E. R. Squibb & Sons, New York.

MENINGOCOCCUS VACCINE, CURATIVE.—Marketed in boxes of 4 syringes containing 100, 200, 400 and 500 million killed meningococci; also in boxes of 2 syringes containing 100 and 500 million killed meningococci; boxes of 6 ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed meningococci, with a syringe, and boxes of 2 ampoules containing 100 and 500 million killed meningococci, with a syringe. E. R. Squibb & Sons, New York.

PNEUMOCOCCUS VACCINE.—Marketed in boxes of 4 syringes containing respectively 100, 200, 400 and 500 million killed pneumococci; boxes of 2 syringes containing respectively 100 and 500 million killed pneumococci; boxes of 6 ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed pneumococci, with a syringe, and boxes of 2 ampoules containing 100 and 500 million killed pneumococci, with a syringe. E. R. Squibb & Sons, New York.

STAPHYLO-ACNE VACCINE.—Marketed in boxes of 4 syringes containing 100 million killed staphylo-

cocci and 25 million killed acne bacilli, 200 million killed staphylococci and 50 million acne bacilli, 400 million killed staphylococci and 100 million killed acne bacilli, and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of 2 syringes containing 100 million killed staphylococci and 50 million killed acne bacilli and 500 million killed staphylococci and 200 million killed acne bacilli; boxes of 2 ampoules containing 100 million killed staphylococci and 50 million killed acne bacilli and 500 million killed staphylococci and 200 million killed acne bacilli, with a syringe. E. R. Squibb & Sons, New York.

STAPHYLOCOCCUS VACCINE.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed staphylococci; also in boxes of 2 syringes containing 100 and 500 million killed staphylococci; boxes of 6 ampoules containing 100, 250, 500, 500, 1,000 and 2,000 million killed staphylococci, with a syringe, and boxes of 2 ampoules containing 100 and 500 million killed staphylococci, with a syringe. E. R. Squibb & Sons, New York.

STREPTOCOCCUS VACCINE.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed streptococci; also in boxes of 2 syringes containing 100 and 500 million killed streptococci; boxes of 2 ampoules containing 100 and 500 million killed streptococci, with a syringe. E. R. Squibb & Sons, New York.

TYPHOID VACCINE, CURATIVE.—Marketed in boxes of 4 syringes containing 100, 200, 500 and 1,000 million killed bacilli; also in boxes of 2 syringes containing 100 and 500 million killed bacilli; boxes of 6 ampoules containing 100, 100, 500, 500, 1,000 and 1,000 million killed bacilli, with a syringe and boxes of 2 ampoules containing 100 and 500 million killed bacilli, with a syringe. E. R. Squibb & Sons, New York.

TYPHOID VACCINE, IMMUNIZING.—Marketed in boxes of 3 syringes containing 500, 1,000 and 1,000 million killed bacilli. E. R. Squibb & Sons, New York.

SMALL-POX (VARIOLA) VACCINE (GLYCERINATED).—Each dose in separate aseptic sealed glass tube, with bulb and needles. Boxes of 5 and boxes of 10 tubes. E. R. Squibb & Sons, New York.

DIPHTHERIA ANTITOXIN.—Curative doses, marketed in syringes containing 2,000, 3,000, 4,000, 5,000, 7,500 and 10,000 units. E. R. Squibb & Sons, New York.

ANTIDYSENTERIC SERUM.—Marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

ANTIPNEUMOCOCCIC SERUM, POLYVALENT.—Marketed in syringes containing 20 Cc. Also marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

ANTISTREPTOCOCCIC SERUM, POLYVALENT.—Marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

ANTISTREPTOCOCCIC SERUM, SCARLATINAL, POLYVALENT.—Marketed in vials containing 50 Cc. H. K. Mulford Co., Philadelphia, Pa.

TYPHO-SEROBACTERIN, MULFORD, IMMUNIZING.—Each package contains 3 syringes of Typho-Serobacterin graduated as follows: First dose, 1,000 million killed sensitized typhoid bacilli; second dose, 2,000 million killed sensitized typhoid bacilli; third dose, 2,000 million killed sensitized typhoid bacilli. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, Oct. 10, 1914, p. 1296).

CYMARIN.—A neutral, non-glucosidal substance obtained from *Apocynum cannabinum* and *Apocynum androsaemifolium*. Cymarin resembles amorphous strophanthin in its actions and is about equal to it in activity. It is more active when injected intravenously or intramuscularly than when given orally. Its uses are much like those of digitalis, but it is best suited in the form of Cymarin Tablets, 1/200

Gr. and Ampoules Cymarin Solution containing 1/60 Gr. cymarin. The Bayer Co., New York (*Jour. A. M. A.*, Oct. 17, 1914, p. 1393).

MALTINE MALT SOUP EXTRACT.—Maltine containing potassium carbonate, 1.1 Gm. to each 100 Gm. and alcohol, 3.88 per cent. Maltine Co., Brooklyn, N. Y. (*Jour. A. M. A.*, Oct. 24, 1914, p. 1479).

ACNE VACCINE.—Marketed in packages of six syringes each containing 12 million bacteria. Greeley Laboratories, Inc., Boston.

ACNE VACCINE.—Marketed in packages of four syringes containing, respectively, 5, 10, 20 and 40 million killed acne bacilli. Schieffelin & Co., New York.

COLON VACCINE.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

COLON VACCINE.—Marketed in packages of two vials each containing, respectively, 50, 100, 200 and 400 million killed bacteria. Schieffelin & Co., New York.

PYOCYANEUS VACCINE.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

PYOCYANO-BACTERIN.—Marketed in packages of four syringes containing, respectively, 50, 100, 200 and 400 million killed bacteria. H. K. Mulford Co., Philadelphia, Pa. (*Jour. A. M. A.*, Oct. 24, 1914, p. 1479).

ANTIMENINGOCOCCUS SERUM (ANTIMENINGITIS SERUM).—Marketed in one aseptic glass cylinder containing 30 Cc. with special sterile needle and stylet; also in one 20 Cc. vial. Schieffelin & Co., New York.

GONOCOCCUS VACCINE.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

GONOCOCCUS VACCINE, POLYVALENT.—Marketed in separate syringe packages containing, respectively, 50, 100, 200, 400 and 1,200 million killed bacteria. Schieffelin & Co., New York.

PNEUMOCOCCUS VACCINE.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

STAPHYLOCOCCUS ALBUS VACCINE.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

STAPHYLOCOCCUS AUREUS VACCINE.—Marketed in packages of six syringes each containing 1,000 million bacteria. Greeley Laboratories, Inc., Boston.

STREPTO-BACTERIN (HUMAN) POLYVALENT.—Marketed in packages of six ampoules each containing 100 million killed bacteria; also in packages of six ampoules each containing 200 million killed bacteria. The Abbott Alkaloidal Co., Chicago.

STREPTOCOCCUS VACCINE.—Marketed in packages of six syringes each containing 500 million bacteria. Greeley Laboratories, Inc., Boston.

SCARLET FEVER TREATMENT.—Marketed in packages of four vials containing, respectively, 50, 100, 200 and 400 million killed bacteria.

TYPHOID BACILLUS VACCINE.—Marketed in packages of six syringes, each containing 1,000 million bacteria; also in packages of six syringes containing, respectively, 100, 200, 400, 600, 800 and 1,000 million bacteria. Greeley Laboratories, Inc., Boston (*Jour. A. M. A.*, Oct. 31, 1914, p. 1577).

PROPAGANDA FOR REFORM

SEROBACTERINS.—While objection may be made to the sensitized living bacteria used by Besredka because there is always an uncertainty as to the action of living bacteria in the animal body, such danger cannot be attributed to the "serobacterins" because they contain dead bacteria, and so far as known, can

do no more harm than other dead bacteria—in fact it is claimed that they are preferable to other vaccines because the toxic products of the bacteria, other than the immunizing properties, have been largely removed. It must be said, however, that these preparations are still in the experimental stage. In great part, careful clinical observations will decide that the serobacterins are really superior to ordinary vaccines (*Jour. A. M. A.*, Oct. 3, 1914, p. 1223).

LACTIC ACID FERMENTS.—There is a large amount of literature to the effect that the *Bacillus bulgaricus* hinders putrefaction in the intestinal canal. While there may be some question as to a greater success in securing the implantation of this bacillus by administering it in "liquid cultures," the report of the Council on Pharmacy and Chemistry shows that such a culture is likely to reach the consumer in a more active state than one in the form of tablets (*Jour. A. M. A.*, Oct. 3, 1914, p. 1223).

AGAR-AGAR BISCUITS.—To make agar-agar biscuits it is only necessary to add finely powdered agar-agar to the flour used in making the biscuit. The amount should be, if possible, sufficient so that a dose of 5 Gm. will be contained in each biscuit (*Jour. A. M. A.*, Oct. 3, 1914, p. 1224).

ACTION OF SODIUM CACODYLATE.—Containing its arsenic in organic combination and in the pentavalent state, which becomes therapeutically active only as it is reduced to the trivalent inorganic state, sodium cacodylate is so slightly toxic that therapeutic doses do not give rise to toxic symptoms. There is nothing in the literature to show that sodium cacodylate has a special action on the eye and blindness from its administration need not be feared (*Jour. A. M. A.*, Oct. 3, 1914, p. 1223).

GLYCOETHYMOLINE REFUSED RECOGNITION.—A report of the Council on Pharmacy and Chemistry cites Glycoethymoline as a typical illustration of a "patent medicine" advertised to the public through the doctor. Different formulas have been ascribed to Glycoethymoline by its promoters from time to time—but whatever the exact composition of this secret nostrum may be, it has been definitely shown that it is but a weak antiseptic solution. Nevertheless, the advertising circulars recommend the use of Glycoethymoline in such serious conditions as diphtheria and ophthalmia of the new-born. Glycoethymoline is in conflict with Rules 1 and 4 of the Council on Pharmacy and Chemistry, because of its indefinite composition and the method of advertising it to the public. It is in conflict with Rules 10, 6 and 8, in that it is an unscientific, shot-gun mixture sold under unwarranted therapeutic claims and under a misleading name (*Jour. A. M. A.*, Oct. 10, 1914, p. 1313).

GLYCOETHYMOLINE NOT HARMLESS.—Glycoethymoline is a mild antiseptic practically devoid of germicidal power and when used as a simple mouth wash is practically harmless. However, the recommendations to the public for its use in serious diseases make it a menace to the public health—and physicians are responsible for its wide-spread use (*Jour. A. M. A.*, Oct. 10, 1914, p. 1304).

DECLARED MISBRANDED.—The Federal authorities have secured convictions under the Food and Drugs Act against the following "patent" medicines: Nurito, West Baden Sprudel Water, Radam's Microbe Killer, Dr. Hilton's Specific No. 3, Dr. Sullivan's Sure Solvent, Russell's White Drops. With the exception of the first two the products were declared misbranded chiefly because false and fraudulent therapeutic claims were made for them. Nurito was declared misbranded because false statements in regard to the ingredients were made and West Baden Sprudel Water because it was not a natural water as claimed (*Jour. A. M. A.*, Oct. 17, 1914, pp. 1408 and 1409).

PHENOLAX WAFERS.—These are tablets said to contain phenolphthalein 1 grain, "aromatics" and sugar enough to make 5 grains. It is a question what purpose the "aromatics" and sugar serve, perhaps these are to mislead the unthinking to believe that this combination has some mysterious value over phenolphthalein itself (*Jour. A. M. A.*, Oct. 17, 1914, p. 1410).

PAPINE (BATTLE AND Co.).—This is a simple aqueous alcoholic solution of morphin, 1 grain to each ounce. It is exploited under the utterly unwarranted claim that it does not nauseate, constipate nor create a habit (*Jour. A. M. A.*, Oct. 17, 1914, p. 1411).

CELERINA AND ALETRIS CORDIAL (RIO CHEMICAL Co.).—Celerina is a shot-gun mixture said to contain, in addition to 42 per cent. of alcohol, kola, viburnum, celery, cypripedium, xanthoxylum and aromatics. Aletris Cordial is said to contain 28 per cent. alcohol (more than is found in wine) besides three obsolete and valueless drugs, aletris, helonias and scrophularia. Whatever virtue there is in Celerina and Aletris Cordial is derived from the alcohol (*Jour. A. M. A.*, Oct. 17, 1914, p. 1411).

USE OF PARAFFIN OIL.—While it is recognized that cancer may be caused by chronic irritation, the paraffin oil used medicinally is bland and non-irritating and there is no reason to suppose that its continued use would cause cancer. A good quality of oil may be obtained by prescribing *Paraffinum Liquidum* or *Petrolatum Liquidum Grave* (*Jour. A. M. A.*, Oct. 17, 1914, p. 1411).

HEMO.—The Thompson Malted Food Company, Waukesha, Wis., which sells Hemo, Malted Milk and Malted Beef Peptone, offers its stock to physicians with promises of large profits. Hemo is advertised as "the food that builds up weak stomachs" and is stated to contain "the iron of spinach, the juices of prime beef, the tonic properties of selected malt in powdered form and the richest sweet milk." Hemo is "promoted" by absurdly extravagant claims and pseudo-scientific nonsense. Disregarding the question whether or not this is a stock jobbing scheme or whether the purchase of the stock is a good investment, physicians who buy the stock and prescribe the firm's output are not giving their patients a square deal (*Jour. A. M. A.*, Oct. 24, 1914, p. 1494).

GINSENG.—Despite the fact that the peculiar man-shaped root of ginseng has no medicinal value so far as science can determine, the Koreans for decades paid their tribute to China in ginseng. In China it is reported as a cure for all ills that human flesh is heir to and has a special reputation as an aphrodisiac. Perhaps there is no better illustration of the virtues of aphrodisiacs in general than the fact that the Chinese are quite sure of the marvelous efficacy of ginseng though no evidence of its virtues can be obtained in the West (*Jour. A. M. A.*, Oct. 24, 1914, p. 1486).

BOOK REVIEW

GENERAL SURGERY. Murphy, Practical Medicine Series. Vol. II, 1914. By J. B. Murphy, M.D. The Year Book Publishers, 327 S. La Salle St., Chicago. \$2.00.

This volume contains an unusual number of reports on a variety of methods of anesthesia and analgesia. The author expresses a hope that the new methods will remain in the hands of those who are expert in their administration so as to avoid adverse criticism and possible damage to the people that might follow administration by unskilled and inexperienced persons. The book contains 608 pages and discusses a large variety of surgical conditions.

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ORIGINAL ARTICLES

THE CAUSE, DIAGNOSIS AND TREATMENT OF INFLAMMATION OF THE PELVIS OF THE KIDNEY*

HERMAN E. PEARSE, M.D.
KANSAS CITY, MO.

1. THE STORY OF INFECTION—PATHOLOGY.
2. SYMPTOMS.
3. DIAGNOSIS.
4. TREATMENT.
5. CASES.

THE STORY OF INFECTION—PATHOLOGY

The tissues of the kidney are extremely resistant to the action of bacteria which occur in the excreted urine. It seems to be the privilege of the kidney to save the patient's life by excreting its poisons and to go unscathed through the ordeal. When the colon bacillus has caused a suppurative dysentery or a gangrenous appendicitis and the forces of the blood have rallied to the battle, the germs are flung by thousands into the blood current and, caught up by the white blood cells, are killed and eliminated by the kidneys. Not only the dead germs but also many living germs, as well as the soluble toxins of the colon bacillus and the results of the necrosis of tissue at the seat of infection are skillfully filtered from the blood and cast off in the urine.

The kidney becomes extremely vascular and active at such times and not only does its dangerous work well, but actively protects its own tissue at the same time. The same condition pertains during all acute infectious fevers and during purulent affections of the liver-ducts and gall-bladder; during the severe infections following childbirth; during the destructive changes of intestinal ulcerations; during long-continued cancerous processes; during the ravages of tuberculosis in various parts of the body—under all these conditions of stress and

danger the kidneys bear the brunt of the task of removing the poisons and the poisoning germs, cleansing the blood-stream and saving the patient's life. Under such conditions, there will be found myriads of germs in the urine as soon as passed. There will be perhaps no pus—just the bacilli or cocci free in the urine. We give the name "bacilluria" to this condition.

Every organ of our bodies, however, suffers from conditions of lowered vitality at times and the kidney is no exception to this rule. And if the source of infection is a long-persisting one the danger is great that at some time while the blood-stream is foul with bacteria one of these hours of lowered vitality will occur and the germ in process of elimination will find a lodgment in the tissues of the kidney itself. Under such circumstances, a process of inflammation and destruction in the kidney itself is set up, similar to that from which the kidney has been protecting the patient. A pus-bearing condition arises usually in the pelvis of the kidney to which the name of pyelitis is given. The term "consecutive nephritis" is sometimes used in this connection. The portion of the kidney usually attacked is the pelvis, as there the blood-supply is least profuse and the nutrition of the part least highly provided for. To be sure inflammation of a purulent nature may attack the parenchyma of the kidney, may localize among the tubules and about the malpighian bodies in the cortex, and form pus cavities that utterly destroy the kidney and do it quickly. To this condition the name of pyonephritis or true "consecutive nephritis" is properly applied. This may occur as an extension from the inflammation of the pelvis instead of occurring directly from the blood-current; in fact, it usually does so. Following such an infection¹ there occurs "gradual dilatation of the calyces with atrophy of the kidney substance, and finally the production of the condition of pyonephrosis, in which the entire organ is repre-

* Read at the meeting of the Vernon County Medical Society, Nevada, June 11, 1914.

1. Osler op. cit.

sented by a sac of pus with or without a thin shell of renal tissue. After the kidney structure has been destroyed by suppuration, if the obstruction of the orifice of the pelvis persists, the fluid portion may be absorbed and the pus become inspissated, so that the organ is represented by a series of sacculi containing grayish putty-like masses, which may become impregnated with lime salts.

Often, however, this condition does not follow, but the disease localizes on the mucous membrane of the pelvis of the kidney and there remains, in a more or less chronic condition, for years. Even when no general infection is present in the body a pyelitis may occur, for pus from decayed teeth, from slight pimples or boils or from catarrhal conditions of the head or nose or ears or tonsils is often present, in fact is almost universally present and is carelessly allowed to persist unhealed and untreated. Under such conditions if the kidney that is loose or movable becomes twisted, if the urine be retained by a kink in the ureter or if a stone cause abrasion in the walls of the kidney pelvis, or if from any cause the resistance of the tissues is lowered, infection will follow and will persist and become chronic if the resisting power of the patient is low or the infecting power of the germ is high. We find every seriously destructive germ as a direct cause of this condition. The terrible streptococcus with its many forms, the staphylococcus, the pyocyanus, the colon bacillus and the bacillus tuberculosis, are all active in forming the central figure of this insidious and frequent condition, and with the dominant germ, others of lesser importance will come in, complicating the case.

SYMPTOMS

(1) Pus in the urine; (2) intermittent fever; (3) chills; (4) wasting and anemia; (5) local tenderness; (6) nervous symptoms, dyspnea, coma, dyspepsia, transient paralysis (probably a peripheral neuritis); (7) cystitis; (8) renal colic.

(1) *Pus in the Urine.*—The pus is not constant. In acute cases with much pus there is no trouble in finding it with the naked eye or with chemical tests. In infections of a lower grade the centrifuge and the microscope will be needed. In extremely dangerous cases, with small resistance and grave symptoms, we may find only bacilluria, that is the poisoning of the kidney by germs which it is excreting and without pus in appreciable quantities. We look then for the germs themselves and not for the pus which marks the permanent implanting of disease on the kidney tissues. Here we may resort to the culture tube inoculated from a

catheter-drawn specimen and grown on blood agar or blood serum-agar. There are days when neither pus nor bacteria can be seen or found. Usually pus can be seen in varying quantities. The patient examiner will soon find it if he secures a daily specimen. Like all other symptoms it intermits. The diagnosis therefore may require several days under close supervision. I have seldom seen a case in which pus could not be found on any one day by centrifuge and microscope. As the trouble may be unilateral and as cystitis or urethritis may be present to contaminate the urine, it is well (if the patient is in hospital) to catheterize the two ureters and obtain an uncontaminated specimen from each kidney. Implant drops from each in a culture tube or plate. From the multiple colonies obtained one must select implants and thus work out more or less pure cultures. This can be done long after the patient is under medical treatment with the gross diagnosis of "bacilluria" or "low grade pyelitis." The object of separating the colonies is to find the different dominant strains of infecting germs. Once these are found it offers an indication for treatment; it also points to the probable source of infection; it also allows us to build an autogenous vaccine to assist the patient in his fight for immunity.

I am wandering from my main topic of symptoms, but the wandering is a discussion on the symptoms of pus in the urine and the usual text-book description of this symptom falls far short of satisfying the inquirer of to-day.

(2) *Intermittent Fever.*—The second symptom, intermittent fever, needs no explanation. The pus intermits—the fever does likewise. When the pus is flowing freely, there should be little or no fever. When the pus does not appear in the urine the kidney is retaining it. By and by it breaks away with or without pain and passes off, and thus appears again in the urine. When the kidney is retaining it, there is apt to be sepsis and fever. I think every case ever referred to me has been cinchonized. In an effort to cure the fever, some have had 40 grains of quinin per day for many weeks, yet the quinin is a handicap, and by its inhibiting power on the white blood-cell, it lessens the chances of the patient's recovery. An intermittent fever is *not* an indication of malaria always. It often means infection of some other germ in lung or kidney. It is always present in pyelitis. The cure for the fever is the cure for the pyelitis.

(3) *Chills.*—The chills of pyelitis may come regularly like malarial chills and may have fever and sweat as malarial chills but they do not demand quinin. Quinin hurts the patient

and should not be given. Often the chills are irregular. They are not always hard. They are often quite light, "dumb chills," "lung chills," "nervous chills," the people call them. But every well-developed case that I have ever seen has at some time had hard chills, and the hard chills of pyelitis are the hardest and most wearing chills I have ever had the sorrow of witnessing. The cure of chills comes only with the cure of the pyelitis and all other infections that have preceded or followed it—other infections in other organs, such as liver abscesses, patches of pneumonia pleuritis, etc., being very apt to occur. The chills are often the last severe symptom to disappear.

(4) *Wasting and Anemia*.—There is less wasting in this disease than one would expect. I recently saw one that had been under treatment by alkaline mineral water for seventeen years, correctly diagnosed and uncured. There was a fair degree of health and the woman had done her own housework for 80 per cent. of her time, or more than nine months of each year. She was not much wasted. Only when the chills occur does the tissue fail and wasting and anemia become marked.

(5) *Local Tenderness*.—I have not been able to prove the symptom of local tenderness. I have percussed up and down the backs of those patients and have only found tenderness when there has been perirenal inflammation. When the hammer stroke gives tenderness over the kidney, it is a valuable sign.

(6) *Nervous Symptoms*.—The nervous symptoms are many and are not valuable in arriving at a diagnosis. Usually the nephritis or pyelitis being known, will serve to explain the coma, headache, dyspnea or smothering and the transient paralysis, but these symptoms seldom point out the disease. Still their presence in a group helps us to suspect the renal nature of their origin and helps us to be patient in working out the urological findings.

(7) *Cystitis*.—Cystitis is usually present and is too often ascribed a place in the causation of the pyelitis when the contrary is often the case. The pyelitis precedes the inflammation of the bladder, and strangely enough the cystitis is quite curable even when the pyelitis above persists in its presence unsuspected. Of course, relapse is certain and frequent.

(8) *Renal Colic*.—Renal colic often occurs during the process of a kidney inflammation when there is no calculus to cause it. The explanation was very nicely given to me recently by my partner, Dr. Edwin Lee Miller, somewhat as follows: The course of a pyelitis is marked by varying degrees of pus formation. When caused by a germ that flourishes best in acid conditions it may be preceding mildly

with only very moderate pus formation and no pain with a natural or alkaline urine. Suddenly the urine attains just the right degree of acidity to promote the greatest possible activity of this germ and it rapidly increases. It clots and clumps the mucus and augments the pus secretion. The ureter blocks and pain ensues. If an operation for stone is done, none is found. The Roentgen ray would have saved this. I recently saw a kidney removed, by quite a prominent surgeon of Kansas City, for hemorrhage and pain. There was no stone, no abscess, nothing to warrant the removal of the kidney. A mistake had been made that culture methods of diagnosis and Roentgen-ray methods and care and study would have averted, and worst of all, the patient has but one kidney left and the cause that crippled the first kidney is still operating undiscovered within the patient's body.

DIAGNOSIS

The diagnosis is suggested by the symptoms of irregular fever, cystitis, irregular chills, nervous disturbances such as dyspepsia, dyspnea, transient paralysis, etc., with possible local tenderness. It is confirmed by the finding of pus in the urine either by the microscope or by culture methods. In attempting to make a diagnosis, one should have access to a laboratory of good equipment, trained skill and indefinite patience. In the absence of proper laboratory facilities, the specimen should be sent to an expert examiner.

TREATMENT

The treatment is sharply defined and runs in four channels: 1. Irrigations. 2. Medicines. 3. Surgical operations. 4. Vaccines.

1. *Irrigations*.—These have proved very disappointing to me on account, probably, of my lack of skill in inserting the ureteral catheter and again because of the pain to the patient and the fear I feel of inflicting trauma. I leave it, therefore, to those whose experience has been more pleasant than mine.

2. *Medical Treatment*.—The patient is given general tonic and supportive treatment and the general health guarded in every way by diet and nursing. Of the urinary antiseptics hexamethylenamin in some of its many forms is most valuable. It should be given in cases of large symptoms, much pus, high blood count, much cystitis, etc. It has been accused of causing bleeding and very often of causing irritation and painful urination. My testimony is positive on this point; it does cause irritation. Hexamethylenamin must be used with care and discretion. It is very valuable when used as a preventative of pyelitis, more so than a cure.

All the balsams are valuable and sandalwood oil I regard as my best medicine. The old Lafayette mixture is excellent. Alkaline mineral waters have a well-earned and deserved reputation, while the citrous fruits, lemon, orange and grapefruit are most valuable helps in shifting the reaction of the urine occasionally. When the germ growing well in an alkaline urine becomes implanted in the kidney, shift the reaction to acid and "loosen its hold." When the colon bacillus, for instance, which grows best in acid conditions is present in the pus, shift the urine to sharply alkaline. Thus we must know from week to week what infecting element predominates to best direct our therapeutics.

3. *Operative Treatment.*—This is demanded when the foci of infection, such as a diseased uterus or tube or a suppurating appendix or a purulent gall-bladder is feeding bacteria into the blood each hour. It often requires a patient search to reveal the source of infection, but once found and removed, the case often gets well so quickly that the trouble is well repaid. Direct operations on the kidney, either nephrotomy or nephrectomy are seldom required, but when needed must be done. One should remember that the whole anatomy of the kidney lends itself to cure by its rich blood-supply and perfect drainage, and if the source can be shut away, the kidney will usually take good care of itself.

4. *Vaccine Therapy.*—This often is brilliantly successful when the vaccine is an autogenous one and when the work that isolates the germ has been carefully done and its growth either in pure culture or mixed culture is well developed and the vaccine properly made. The autogenous vaccines are superior to the stock vaccines in these cases. They can be made only in laboratories equipped for the work.

CASE 1.—Record 46. A case of unilateral pyelitis followed by stone caused by the mixed colon and typhoid germs.

A single woman of 25, a teacher, came to me March 1, 1910, complaining of abdominal pain and fever. I made a diagnosis of typhoid fever because of the pulse in relation to the fever and the low blood-count and a positive Widal reaction. She was turned over to a medical man, Dr. Wheeler, for treatment, and put to bed, with trained nurse in attendance. The doctor called me back a few days later, saying the patient had some abdominal pain and distention. His diagnosis was peritonitis. A uranalysis then showed pus in the urine. The next day the fever suddenly left her. The diagnosis on my part of typhoid fever was withdrawn and Dr. Wheeler also withdrew his diagnosis of peritonitis, and we promptly agreed upon a diagnosis of pyelitis. Roentgen-ray examination showed a calculus, and Dr. Frank Hall found the dominant germ to be colon bacillus. She had repeated attacks of renal colic, cystitis, leucorrhœa and apparent peritonitis during

the summer, and in spite of treatment, grew slowly worse. After a terrible attack on August 3, 4, 5 and 6, 1911, she entered St. Luke's Hospital for removal of stone. I found the kidney full of abscesses and removed kidney, stone and ureter. The infection proved to be typhoid bacillus and colon bacillus. She had had typhoid fifteen years before. She has since been quite well, and Widal test has been negative.

CASE 2.—Record 948.—A case of pyelitis—bilateral with colic and chills—cured by removal of a purulent collection in the gall-bladder and 28 stones, followed up by sandalwood oil and alkalies.

A married woman of 45 came to me with a history of many years' kidney pain with some hemorrhages, some pus in the urine and renal colic sometimes on the left side and sometimes on the right. The present attack had been confined to the left side, and she came with the diagnosis of left renal stone for operation. She had had several terrible chills. Her abdomen responded to the sign for gall-stones, yet she never had given any gall-stone symptoms, save dyspepsia and aching on the right side. Her urine had been examined many times, always with pus findings save twice. My own ureteral catheterization showed pus from both kidneys, and culture proved it to be colon bacillus. Roentgen ray failed to show any kidney stones, Murphy's sign was positive. So I operated not over the kidney, but over the gall-bladder and removed 28 gallstones and drained a purulent gall-bladder. Her recovery under medicine was marked by no more severe chills, but by some attacks of pus in the urine. The following letter, a copy of that sent to her family doctor, shows how this condition is handled in my service:

"Dear Doctor:—Last Monday Mrs. ——— began passing pus in the urine. There was about one-half an ounce in twenty-four hours. It came on quite suddenly. The explanation seemed to be that for about a week she only passed 18 ounces of urine each day. This concentrated urine gave rise to renewal of the old infection. The bacteria then clumped, and she had some slight pain and ill feeling. She was placed at once upon urotropin, and by Wednesday was having some bladder symptoms. She was then given 1-dram doses of carbonate of soda every four hours for twenty-four hours, but the urine remained acid. One ounce of bicarbonate potash was then put in a pitcher of lemonade containing one-half gallon. She was directed to drink it all during the day. A glass of cracked ice was kept beside the pitcher from which she drank. She got through with the lemonade and bicarbonate of potash, and at 2 o'clock Thursday the urine was alkaline. The urotropin was changed to methylene-blue pills. All irritation stopped; all kidney pains stopped and the pus is rapidly disappearing from the urine.

"I write this for your guidance when she returns. She must be kept on urinary antiseptics for a year or so, and the urine must be changed from acid to alkaline and from alkaline to acid while she is taking it. The amount must be increased with lithia, vichy and pitchers of lemonade. I imagine that when she goes home you can give her a large amount of buttermilk which will probably do the same as lemonade. She will start home in a short time."

This letter illustrates the manner of curing, by medicine, a bilateral infection of the kidneys. The judgment of the surgeon must direct him when and where to interpose operation.

1201 Rialto Building.

DRAINAGE IN GENERAL PERITONITIS*

W. E. LEIGHTON, M.D.
ST. LOUIS

Grekow, chief of the surgical clinic of the Obuchow Hospital of Petrograd, reported 902 operated cases of diffuse peritonitis during the last twenty years. The mortality varied according to the cause, but averaged 63.3 per cent. The high mortality of his cases, he thinks, was due to the late stage in which his patients were first seen. During this period the treatment of general peritonitis has gone through a decided surgical evolution. Not only has the point for making the abdominal incision been discussed, but also the character of the drainage material, the points to which the drains should be carried, and even the position in which the body should be placed postoperative. It is this latter factor which I wish to discuss to-day.

Seventeen years ago an American surgeon by the name of Clark was the first to mention posture as a factor in abdominal drainage. He advocated placing the patient in a Trendelenburg position, in order that the diaphragm, rich in lymphatics, could take care of infectious material. The disadvantage of this position soon became manifest and was early abandoned. Three years later, Fowler of Brooklyn published the results of nine consecutive cases of diffuse peritonitis successfully treated in the so-called Fowler position, or half-sitting posture. In 1907, Coffey showed some of the fallacies of the Fowler position, and advised the placing of drains in the flanks as well as in the pelvis and turning the patient on the right side with slight elevation of the head and shoulders. Coughlin of St. Louis did a nice piece of research work from which he deduced the following conclusions: The pelvic cavity could not be completely drained of water by raising the supine body even to 90 degrees. The pelvic cavity could be completely emptied of water by turning the horizontally placed body just more than midway between pronation and supination. He advocates making drainage below and internal to the anterior superior iliac spine.

During the past year and a half I have used a position known as the prone position or ventral decubitus in all cases of diffuse and localized peritonitis, with such good results that I venture to report them. Harbin appears to be the first as well as the last to advocate this position. He published a case report in 1905 of a patient successfully treated in this position. To all to whom I have mentioned this position, I have met with the reply that it must be very

uncomfortable. In answer to this I wish to say that we are dealing with a very serious condition, the mortality of which varies from 30 per cent., according to some authorities, to the 63 per cent. above mentioned, and the question of comfort is not one to be considered. As a matter of fact, the position is not especially uncomfortable and has several advantages: First, it affords rapid drainage of the peritoneal cavity, and second, prevents gas accumulation in the bowels. For this latter reason the position is quite strongly advocated postoperatively by the Mayos.

The method in brief, as I have employed it, consists in opening the abdominal cavity at the site of the focus of infection, treating the lesion as indicated by the condition found with as little and as gentle handling of the peritoneum as possible, then inserting large cigarette drains to the pelvis, right inguinal region and right flank. The wound is closed rather loosely so as not to constrict the drains, as drainage and not the prevention of hernia is the aim sought. The patient is then placed in bed, without elevation of the head, in the ventral decubitus. The method has proven very successful. The drainage has been free and abundant for the first few days. The effect on the temperature has been striking. In several cases practically dropping to normal on the second day. In a series of nine cases of diffuse peritonitis, I have had eight recoveries and one death, and in seven cases of local peritonitis there were no complications.

CASE 1.—C. I. B., Oct. 7, 1912. General peritonitis following a perforating appendix. On opening the abdomen through a right rectus incision there was an escape of foul-smelling purulent fluid containing castor-oil and fecal matter. The appendix had perforated at the base through which oil and feces were pouring into the abdominal cavity. The opening was closed with a purse-string suture. Large cigarette drains were placed in the pelvis, cecal region and right flank. Wound closed loosely. Patient returned to bed and placed in the ventral position. Proctoclysis was given by the Murphy method. During the next five days the temperature gradually dropped from 101.4 to 98.4 F. The drains were removed on the fifth day. Patient discharged six weeks later, Nov. 25, 1912.

CASE 2.—M. J., Dec. 19, 1912. General peritonitis following a perforating appendix. Abdomen opened through right rectus incision. Escape of seropurulent secretion. Appendix gangrenous and perforated. Appendix ligated and removed. Large cigarette drain placed in pelvis, appendiceal region and right flank. Wound closed loosely. Patient returned to bed and placed in ventral position. Proctoclysis by the drop method was begun. Temperature 104 F. per rectum. On the following day the highest temperature recorded was 100.4 F. The next day temperature was normal. The drains were removed on the sixth day. Patient discharged Jan. 19, 1913.

CASE 3.—J. K., Dec. 2, 1913. General peritonitis following gangrenous appendicitis. Abdomen opened through rectus incision. Large amount of seropurulent fluid found throughout the peritoneal cavity.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

Appendix gangrenous, ligated and removed. Large cigarette drains placed in the pelvis, right appendiceal region and right flank. Wound closed loosely. Patient returned to bed and placed in ventral posture. Temperature 104.6 F. Highest temperature recorded the following day was 100.6. Fourth day temperature not above normal. Wound drained profusely for eight days, when the drains were removed. Patient discharged Jan. 7, 1914.

CASE 4.—E. R., Jan. 7, 1914. General peritonitis from a perforating appendix. On opening the abdomen through a right rectus incision the peritoneal cavity was found filled with a seropurulent exudate. Appendix was gangrenous and retrocecal. This was ligated and excised. The peritoneal cavity was drained by means of large cigarette drain to the pelvis, cecal region and right flank. Wound closed loosely. Patient was returned to bed and placed in a ventral posture. Proctoclysis was given by the Murphy method. The temperature, which was never over 101 F., reached normal on the second day and remained normal. The drains were removed on the fifth day. Patient discharged Jan. 24, 1914.

CASE 5.—S. T., Jan. 15, 1914. General peritonitis from a perforating appendix. The abdomen was opened through the right rectus muscle. Considerable free fluid escaped. The pelvis was filled with a seropurulent exudate. The appendix, which had perforated, was ligated and removed. Large cigarette drains were placed in the pelvis and right flank. The abdominal wound was closed loosely. The patient was returned to bed and placed in a ventral position. Saline proctoclysis was given by the drip method. The temperature was 100.4. It reached normal on the second day and remained normal after the sixth day, when the drains were removed. Patient discharged Jan. 24, 1914.

CASE 6.—J. H., Jan. 7, 1914. General peritonitis from a gangrenous appendix. Abdomen was opened through a right rectus incision. There was an escape of considerable seropurulent exudate. The appendix, which was gangrenous, was ligated and cut off. Large cigarette drains were placed in the pelvis, cecal region and right flank. The wound was closed in layers loosely. Patient was returned to bed and placed in ventral decubitus. Saline proctoclysis was given by the Murphy method. The temperature, which was 104 F. at 2:30 p. m., dropped to 100 F. five hours after the operation. The patient developed a bronchitis with purulent expectoration which kept the temperature slightly above normal for the next few days. All drains were removed on the eighth day, when the temperature continued normal. Patient discharged Feb. 6, 1914.

CASE 7.—J. E., Oct. 27, 1913. General peritonitis following typhoid perforation eighty-four days after onset. Abdomen was opened through the right rectus muscle. A large amount of serous exudate escaped. A perforating typhoid ulcer was found about six inches from the ileocecal valve, through which intestinal contents was escaping. The perforation was closed with a purse-string suture. Large cigarette drains were placed in the pelvis, right iliac and right lumbar fossae. Abdominal incision was closed in layers, care being taken not to constrict the drain. The patient was returned to bed and placed in ventral position and saline proctoclysis given. The drainage was profuse for several days. At no time did the patient look bad following operation, although the temperature did not drop in this case, but ran a typical typhoid course for about two weeks. The drains were removed on the sixth day and there was very little discharge. Patient discharged on Nov. 27, 1913.

CASE 8.—W. J., Oct. 13, 1913. Gun-shot wound of intestines. Peritoneum soiled with fecal matter. The

abdomen was opened in the midline to the right of the umbilicus. Peritoneal cavity contained much blood and intestinal contents. Eight perforations of the small intestines, two perforations of the transverse colon and a rent in the cecum were found and closed, and the bullet removed from the right iliacus muscle. Large cigarette drains were placed in the pelvis and right lumbar fossa. Wound was closed in layers and the patient was returned to bed and placed in the ventral posture. Saline proctoclysis was begun. The drainage was profuse for several days. All drains were removed on the fifth day. About two weeks later an abscess formed in the right iliacus muscle, which was drained through an incision just internal to the anterior-superior spine of the ileum. Patient had no further trouble and was discharged well, Dec. 3, 1913.

CASE 9.—A. M., Dec. 26, 1913. General peritonitis following trauma. An incision was made to the right of the umbilicus for exploration. A seropurulent exudate was found as well as a plastic exudate over the intestines. No perforation of the viscera could be made out. Cigarette drains were inserted into the pelvis, right iliac and right lumbar fossae. Patient was returned to bed and placed in ventral posture. Saline proctoclysis and stimulants were given, but the patient never rallied and died three hours later.

In conclusion, I wish to say that the most striking feature brought out in the treatment of general peritonitis during the past twenty years is that of posture, which was so successfully demonstrated by Fowler, and later improved by Coffey who placed it on a more rational basis. The latter says, "The two mechanical principles involved in peritoneal drainage are gravity and capillarity. Gravity is the most important principle in peritoneal drainage. The drains must reach the most dependent point of the cavity to be drained."

If gravity is the most important factor, then it would seem as if the ventral decubitus would be the logical position, since there are no pockets formed in this position. The incision is at the lowest point for affording a rapid evacuation of any abdominal fluid. The success in drainage of the peritoneal cavity must depend to a certain extent on the rapid removal of the exudate, otherwise the adhesions, which form about the drains and which vary according to the material used from eighteen to seventy-two hours, might wall off collections from the drainage tubes.

The results attained by this method have been so striking that I feel warranted in presenting it as fulfilling the requirements of drainage better than any other position.

Humboldt Building.

DISCUSSION

Dr. W. F. Morrow, Kansas City: Relative to the position of these cases where the infection begins in the vicinity of the appendix, it has been my fortune or misfortune to have about seven or eight cases of this kind in the last month. I remember that about two and a half weeks ago there was a fellow brought into the hospital who was enormously distended, his temperature, as I remember, running up to about

102 F. He was suffering and they sent for me. I operated on him at 11 o'clock that night. When we made the incision, we found that there was a very marked odor escaping from the peritoneal cavity, and there was a condition present that looked fearful; so I made a good, long incision and drained out thoroughly and removed a rotten appendix. I put in there a split rubber tube with an iodoform gauze right down into the fossa and left him, putting him in the semi-erect position or head-rest under his entire body. To my surprise, next morning on returning to the hospital I found him alive. His temperature on the afternoon of the next day finally ran down, and he made a complete recovery; a day or two ago, was walking around the hospital. In a number of other cases in connection with this class of condition we have placed them in the semi-erect posture and the drainage was sufficient. In the first case that I referred to the drainage was sufficient, the secretion was of the pea-green soup type, but he made an uninterrupted recovery. I noticed a gentleman on the street to-day that I operated on within the last six weeks, who had one of those sloughing, gangrenous type of appendices with a localized peritonitis. So from my experience in these cases I believe if we operate on them and get a thorough drainage and a good position—in my judgment, a good position is the one I gave the patient whom I have mentioned—you will have a recovery in nearly all such cases.

OBSERVATIONS ON THE PRODUCTION OF IMMUNITY BY THE TONSILS AND ADENOIDS IN CHILDREN *

JOHN ZAHORSKY, M.D.
ST. LOUIS

For several years I have been specially interested in the gradual production of immunity to the respiratory infections in children. The baby, as a rule, is extremely susceptible to these acute catarrhs; as the child grows older this susceptibility becomes less. Some children have an annoying tendency to recurrent attacks of inflammation in the respiratory passages. The physician is often consulted as to the best prophylactic measures and the problem has confronted me many times.

In the production of this immunity there are two processes which must be considered—namely, the change in the fluids of the body, and the local changes in the structures of the air passages. Alteration in both of these, inimical to the development of bacteria, constitutes a relative immunity.

What part does the faucial and pharyngeal lymphoid tissue play in this important life-preserving process? My observations have led to a few tentative conclusions, which are here presented together with illustrative cases.

1. Acute infection of the tonsil with a normal reaction rapidly immunizes the body against a variety of infections and thereby protects the bronchial tubes and lungs.

The following observations illustrate this law:

CASE 1 and 2.—B. L. and E. L., sisters, aged 12 and 8, respectively, were both attacked by a grippal inflammation of the air passages. The former had a severe bronchopneumonia, the febrile period lasting eight days, and complete recovery required ten days longer. The younger child had a typical follicular tonsillitis lasting three days. She did not contract any further illness although she played with her sister in day-time and slept with her at night. The tonsillitis evidently had made her immune.

Children who have repeated attacks of tonsillitis are less subject to bronchitis and bronchopneumonia. This has been observed repeatedly.

CASE 3.—B. L., female, 3 years old, had an attack of follicular tonsillitis when about 6 months old. She has had seven distinct attacks, each with marked febrile reaction since then. She has had no bronchitis nor bronchopneumonia.

On the other hand, the removal of tonsils in young children sometimes predisposes to bronchitis and bronchopneumonia.

CASE 4.—J. M., female, 6 years old, had repeated attacks of tonsillitis but no-bronchitis until one year ago when the adenoids and tonsils were removed. Soon after the operation she passed through a severe attack of bronchitis and bronchopneumonia. She had a second attack of bronchopneumonia nine months later.

CASE 5.—R., boy, 8 years old, had his tonsils and adenoids removed when he was 5½ years old. Previous to this he had only one or two attacks of bronchitis. Since the removal of the lymphoid structures of the throat the attacks of bronchitis and bronchopneumonia have been very frequent. There has been a great relief, however, during the last ten months after passing through a prolonged and serious attack of pneumonia last spring. The severe reaction following the pneumonia seems to have immunized him for a while at least.

Another clinical observation by no means rare is that an acute exudative tonsillitis with fever will rapidly terminate a diffuse catarrh of the upper air passages.

CASE 6.—J. S., aged 4 years, was suffering from an acute catarrh of the upper air passages, coryza and bronchitis. The cough was becoming very severe when suddenly the temperature rose to 103 degrees. Examination revealed a follicular tonsillitis. This ran the usual course and terminated by crisis on the third day. The bronchitis and coryza disappeared at the same time.

Of course this law has exceptions. A child may have tonsillitis at one season and bronchitis at another. The tonsils, faucial and pharyngeal, can not always intercept the microorganisms which enter the respiratory tube. Normally, the healthy child must depend on the antiseptic activity of the nasal pharyngeal and tracheal secretions. My observations tend to show that after an acute inflammation of the adenoids or tonsils the germicidal effect of

* Read before the Bethesda Pediatric Society, October, 1913.

these secretions is greater. No doubt there are many children whose bronchial secretions are always sufficiently germicidal to prevent any infection of either the lymphoid or mucus structures of the respiratory tract. This is, however, the exception; the majority of children are annually subject to one or more attacks of acute catarrh.

2. *Hyperplasia of the lymphoid structures of the nose and throat which does not react in attacks of acute infections, does not show any marked influence on the production of immunity to respiratory diseases.*

Even in these cases in the young child this hyperplasia may be a compensatory process. They are children who show defective nutritive processes and are often grouped under the diatheses, lymphatism or exudative diathesis. Removal of the tonsils and adenoids never produces any marked effect on the nutrition and no effect on the recurrent catarrhs.

CASE 7.—L. W., aged 5 years, was a bottle-fed baby who gave the attendant physician much anxiety in feeding. He suffered from eczema during infancy, and when about 1 year old began to suffer from repeated attacks of asthmatic bronchitis. Some of these attacks were fleeting but a number of them were accompanied by febrile movement, great dyspnea and prostration. The adenoids were removed when he was 2½ years old but this operation while improving the nasal breathing had no effect on the recurrent attacks of asthma. The tonsils were moderate in size and never diseased. The child has been free from attacks during the last year following treatment by mixed bacterins.

CASE 8.—V. M., a girl, had pyelocystitis during infancy and several acute digestive disturbances. When 8 months old began to have recurrent attacks of asthmatic bronchitis. For these, first the adenoids and then the tonsils were removed, without any marked effect. She is now about 6 years old and still has an occasional attack of bronchitis.

CASE 9.—N. S., aged 6 years, boy, has had repeated asthmatic paroxysms since infancy. They usually begin as "colds" in the head. To cure this condition, both tonsils and adenoids were completely removed eighteen months ago, although he had not been subject to sore throat. The operation apparently had no effect on this tendency to bronchitis. About one year ago he had an attack of appendicitis, which passed off without operative procedure. By the prolonged administration of arsenic and keeping the child outdoors all the time, he has had only one mild attack in the last eight months.

3. *Hyperplasia of the lymphoid structures of the nose and throat, attended by recurrent attacks of inflammation, not exudative, show a defective immune-producing power of the body.*

In these cases, endocarditis, chorea and cervical adenitis frequently occur. It is a nice clinical question to decide whether to send the child to another climate and institute other measures which improve the general health or take out the adenoids and tonsils.

CASE 10.—E. S., girl, 5 years old, had an attack of the grip in December, 1908. Following this she had repeated attacks of angina and tracheitis all winter. She was kept indoors. The nasal breathing was obstructed by adenoid vegetations and the tonsils were always large and congested. A laryngologist who was consulted advised waiting with the operation. The girl coughed all winter without showing any marked physical signs of bronchitis. Hypertrophy of the bronchial glands was not demonstrable. In the following spring she took a trip South and after two months sojourn there she returned in splendid health. The hyperplasia of the tonsils had diminished, breathing through the nose was good. The adenoid vegetations were not removed until two years later.

CASE 11.—J. R., a boy, 9 years old, had been subject to recurrent attacks of bronchitis in infancy. When about 5 years old began to have attacks of tonsillitis and adenoiditis about once a year. His bronchial mucous membrane is less subject to disease since then. His nutrition is always poor, he has no appetite, is irritable, has no great inclination for out-door sports. In February, 1913, he, with his brother, (Case 12) had an attack of grip, which came on gradually and resulted in subacute inflammation of the tonsils. His adenoids had been removed the year before. This tonsillar disease was complicated by a severe and prolonged attack of chorea, which ended in recovery. He still has his tonsils.

CASE 12.—J. C., boy, age 7 years, was taken sick at the same time as his brother (Case 11). He had subacute adenoiditis and tonsillitis. There was no tonsillar exudate. An endocarditis of mild character followed this throat disease, but he recovered with good cardiac function after two months. His adenoids were removed recently, on account of impaired nasal function.

The question of rheumatism and tonsillar infection in children has not been definitely answered. There is little doubt that the *Streptococcus rheumaticus*, or the *Streptococcus viridans* may enter the circulation through the tonsils, but it is still a question whether there is a fault in the anatomical structure of the tonsil or the bactericidal power of the blood. Rosenau's experiments seem to favor the latter proposition. In the last few years I have seen two cases of rheumatism and endocarditis develop in boys, who had both tonsils and adenoids removed. The clinical problem then is not so much the removal of the tonsils, as to insure by some medicinal or hygienic measure the immunity of the secretions and blood against the *Streptococcus rheumaticus*.

CASE 13.—R. K., boy, 10 years old. He was seen first in the spring of 1911 suffering from rheumatic fever complicated by endocarditis. He had been sick six weeks when he came under my observation. The onset of the disease was gradual with irregular joint pains, which were sufficiently severe to prevent him from walking. He recovered after three months' care with markedly insufficient mitral valve and cardiac hypertrophy. The disease was complicated by a persistent bronchitis, which produced distressing coughing spells.

In the following two years he passed through several attacks of bronchitis. Only recently a severe and persistent attack of bronchiolitis was associated with some joint pains and cardiac embarrassment, and necessitated his non-attendance at school for three months.

This was another case in which the removal of tonsils and adenoids had no effect, in fact aggravated the catarrhal tendency.

CASE 14.—M. E., aged 7 years, had a severe attack of rheumatism two years previously. This was accompanied by endocarditis. It took six months to get the child out again, with a crippled but competent heart. One year later both tonsils and adenoids were removed. Eight months after the operation he had an attack of angina in which some vestiges of the tonsils were observed between the pillars in acute inflammation. A very mild irregular fever followed; this was soon shown to be due to valvular disease and in spite of prolonged rest and careful treatment, ended fatally after three months.

These two cases have taught me that the complete removal of the tonsils in young children by no means prevents the occurrence of rheumatic fever. It is useless to argue that the tonsils were not completely removed. It is impossible to remove all the lymphoid tissue of Waldeyer's ring. Furthermore, several cases might be cited in which, after a primary rheumatic endocarditis, no removal of the tonsils was performed and the child has had no recurrence after several years.

A study of glandular enlargements following adenoid or tonsillar infection also leads to contradictory findings. At least three children have come under my observation who had a greater tendency to glandular swellings after removal of the tonsils and adenoids. In these cases, too, it is the resistance offered by the fluids and leukocytes rather than the absence of tonsils that minimizes glandular infections. It is well known that glandular adenopathy occurs most frequently and in the most severe form in young infants in whom the Waldeyer's ring is still poorly developed. Healthy tonsils rather resist than favor glandular infections.

There is little to sustain the common contentions that enlarged tonsils or adenoids are inimical in cases of scarlet fever and diphtheria. The worst form of each disease is often seen where the lymphoid tissue is poorly developed, for example, one of the most persistent cases of scarlet fever with enormous glandular enlargement occurred under my observation in a girl of 12 years, whose adenoids and tonsils had been thoroughly removed a year before. Two fatal cases of scarlet fever occurred in young children who had very small tonsils. On the other hand, well-constructed tonsils, which show a prompt exudate in scarlet fever, must be considered serviceable to the defensive forces.

I will venture to go still further—namely, that contrary to our text-book teaching, the pharyngeal tonsil rather prevents than favors, the development of infection of the middle ear. This was well illustrated in my own family. The boy had adenoid vegetations for several years, at times the Eustachian tube would be blocked so that deafness would result and yet he never had an earache. On the other hand, the girl never has shown adenoid hypertrophy and she has had two attacks of otitis media. Otitis media occurs especially when the adenoid lymphoid tissue is poorly developed, as in infants.

Inflammation of the Eustachian tube is due to an infection of the mucous membrane and not the lymphoid tissue. Just as tonsillar inflammation protects the faucial mucous membrane, the adenoid tissue protects the nasopharyngeal mucous membrane.

But, do not conclude from this that I am opposed to all operations on the tonsils and adenoids. These facts, however, should warn us to go slow in the removal of tonsils and adenoids in the formative periods of life. I desire only to protest against the indiscriminate removal of these organs on the most trivial grounds.

When the adenoid vegetations interfere with nasal respiration, they should, of course, be removed, at any age of life, but the mere presence of some palpable lymphoid tissue in the nasopharyngeal space in a child subject to acute catarrhs, does not justify immediate operative interference. It is questionable that an acute attack of otitis media indicates the surgical removal of the adenoid vegetations, unless examination reveals them to be of sufficient size to interfere with breathing, or block the opening of the Eustachian tubes.

Several cases might be cited of the occurrence of acute otitis media after the operation for the removal of the adenoids. My own observation tends to show that acute inflammation of the middle ear is not more frequent in those children having large adenoid vegetations, than in those who have very small ones.

Nevertheless, the necessity of proper nasal and tubal function is so great that adenoids should be removed when the indications of considerable hypertrophy is present. Fortunately enough lymphoid tissue remains in most cases to take up the protective function.

The tonsils present an entirely different problem. Their complete removal, even when the best technic is used, as in the Sluder operation, results in considerable shock. The hemorrhage and diminished digestion following the operation, lowers the nutrition, sometimes very much, hence, the child's resistance is very much diminished. Therefore the tonsils should

not be removed until the child is 7 or 8 years of age, and even then not unless the indications are very clear.

What are these indications? The most important one is that the tonsil from frequent previous diseases has become changed in structure, so that infectious material can not be discharged. When the leukocytes can not emigrate easily into the follicles, on account of fibrous tissue, when the canals are more or less obliterated, when minute abscesses are suspected, then the tonsils must come out. Mere enlargement, unless the degree is such as to interfere with deglutition or breathing, should not be a sign for operation. After puberty, however, the function of the tonsils may be disregarded and any enlarged tonsil or abnormal tonsil can be removed without question.

In the young child the question of the removal of the tonsils offers a complex problem, which can only be solved by a careful consideration of the past history, especially in regard to resistance to respiratory infections, the state of the nutrition, the condition of the blood and finally the local anatomical changes. To do the patient justice the pediatricist and surgeon should confer on every case in which an operation is suggested.

1460 South Grand Avenue.

ECLAMPSIA *

A. J. CHALKLEY, M. D.
LEXINGTON, MO.

There is nothing that frightens a mother more than a spasm in her child, and there is nothing that gives a physician more concern than a puerperal convulsion. I never knew but one mother to get used to spasms. She had several children and they all have had spasms whenever any febrile condition existed. The physician realizes that the spasm of teething and gastro-enteritis is rarely fatal, and he can relieve the patient and encourage the mother, but he is always in grave doubt as to the outcome of eclampsia and it puts him on his guard as to how best to take care of the patient.

Eclampsia may be classified as anti-partum, intra-partum, and post-partum. The anti-partum is the most common and the most serious. It sometimes occurs in the first half of pregnancy, but nearly always toward the latter half, and more frequent the nearer the term is approached.

Seventy to 80 per cent occur in primipara. The convulsion often comes very unexpectedly;

and the expression, "like a bolt from a clear sky," is a very appropriate one. The number of convulsions varies from one or two in favorable cases to a hundred or more in fatal cases. The immediate cause of death is usually edema of lungs or apoplexy.

There is something peculiar about the prevalence of eclampsia, sometimes being suggestive of an epidemic. No doubt most of you read the article in this journal last autumn, by Dr. Miller of Liberty, stating that after not seeing a case for fifteen years, he had six within a short time, four of which proved fatal. I had two within four months after a lapse of five years. The average is given as one in every 200 to 500 labors. In Tarnier's clinic in Paris there was one case in every forty-seven labors. in 1872, and one in 730 in 1882.

Eclampsia has been called "the disease of theories." We are not satisfied now to consider it solely a kidney affair. The renal origin was long considered the true cause, and has many advocates to-day, due to the fact that in a large percentage of the cases there was albumin and casts in the urine. But many women with nephritis do not have eclampsia and many have eclampsia without presence of albumin or casts in urine.

Pathologists have discovered a degenerative change in the liver in most cases, so the liver was looked on as the exciting cause for a time. Some have considered it to be of pure nervous origin. The main lesions are in kidney, liver, and brain and the clinical and pathological history give evidence of some poisonous substance in the circulation which produces thrombosis and consequent necrosis in the various organs. Whether the poison is from fetal metabolism or what the origin is, is not certain. But the theory of auto-intoxication has the floor at present.

Sajous expresses it as follows: "During pregnancy the mother's blood becomes increasingly laden with waste products, those of the developing fetus being added to her own. To protect her organism, her adrenal system, including of course, the thyroid apparatus, becomes increasingly active, owing to the exciting action of these products on the test-organ, to insure destruction of all wastes as soon as they are found. When the adrenal system does not become sufficiently active to enhance adequately the blood's antitoxic properties, including the phagocytosis, the toxic wastes are allowed to accumulate in the blood in sufficient quantities to produce convulsions, i. e., the eclamptic seizure.

My first experience with eclampsia was while an intern at the St. Louis City Hospital. I saw two cases within a few days of each other

* Read before the 14th District Society at Marshall, April 23, 1914.

treated by one of the senior interns. Both died without regaining consciousness. I think both were primipara in the last half of pregnancy. Five years ago I saw a case in consultation in a primipara. The first convulsion came on immediately after a normal labor. The patient only had one convulsion, and has borne a healthy child since, without any return of the trouble.

At six o'clock Sunday morning, Sept. 21, 1913, I was called to see Mrs. L., aged 18, primipara, who expected to be confined the next day. She had been in splendid health and spirits during the entire pregnancy and was delighted at the prospect of an heir. She retired Saturday night apparently in perfect health and joked with her husband. She slept peacefully all night, but when I reached her Sunday morning found her unconscious and in a few minutes had her first convulsion. They continued about every thirty minutes. Skin was dry, pulse full and bounding, and of high tension. Labor had not begun. After trying to stop convulsions by the usual means, I called in Dr. Fredendall and we brought on labor as rapidly as possible and finally delivered her of a dead child. The patient had a good free hemorrhage, and after delivery convulsions got further apart, and about the time I would think it safe to leave her, a terrific spasm would occur again. She had altogether about thirty convulsions and remained unconscious until Tuesday night, after which she gradually recovered her former health and is now, much to my chagrin, about three months pregnant. She does not to this day recall anything from Saturday night to Tuesday night.

Her urine at time of confinement was loaded with albumin and casts. I did not test for urea but there had been no edema, headaches, uneasiness, or adverse symptoms of any kind. The albumin persisted for about six weeks. Her grandfather and one uncle died of Bright's disease.

The second case, Mrs. S., aged 16, primipara, occurred on Jan. 4, 1914, and was almost an exact duplicate of the first except that she was only about six months pregnant. The morning of her trouble I was making a call in the neighborhood when I was asked to see Mrs. S. She was complaining of headache, and there was some edema of lids. I prescribed for the head and a diuretic and asked for a specimen of urine. I had been back in town only a short time when I was called to see her on account of convulsions. The use of chloroform, morphin and hot packs did not stop the convulsions, so I started in for as rapid delivery as possible. The dilatation and delivery in this case was more difficult than in that of Mrs. L. On the second day she re-

gained consciousness after about twenty-eight convulsions. The first of her urine that I was able to obtain was by catheterization. It was loaded with albumin. Her recovery was rapid and apparently complete.

With these two patients I was left in practically constant attendance for three days and nights and had opportunity to observe them closely and use many of the suggested remedies.

I used chloroform to control the convulsions, and started in immediately on elimination by use of elaterim and croton oil and hot packs of entire body and pilocarpin. I also used morphin in the hopes of quieting the frequency of convulsions. I have not used tincture veratrum viride nor thyroid extract. I failed to derive any benefit from the morphin or packs and almost none from the pilocarpin, but did get some edema of lungs in the first case, which was probably due partly to the pilocarpin and partly to general weak condition of the patient. I attribute the recovery in these two cases to the prompt delivery.

Dr. Ballantyne, physician to the Royal Maternity Hospital of Edinburgh, advocates the following treatment. If any of the prodromata of eclampsia occur, the first step is to put the patient on a milk only diet, and keep her on it until albumin is only a trace, and blood-pressure falls to normal. If symptoms still persist, then one or all of the following six measures are resorted to: venesection, 10 to 12 ounces; transfusion, 2 or 3 pints; stomach washing, Na_2CO_3 ; introductions of magnesium sulphate, 6 ounces, into stomach by tube; large enema, and hot pack. Then if these fail induce premature labor.

In a recent letter from Professor Williams of Johns Hopkins in regard to the experimental evidence that chloroform causes degeneration of the liver lobules, he now recommends ether where an anesthetic is necessary. Dr. E. W. Saunders of St. Louis, lays stress on milk and fruit, and salt-free diet, has great faith in veratrum and venesection. Thinks chloroform is unsafe, and advocates as early and rapid delivery as compatible when convulsions arise.

I am a firm advocate of frequent urinalysis in pregnant women, especially in primipara and those we are waiting on for the first time, and we should keep on the lookout for any of the symptoms of pre-eclamptic state such as persistent headaches, edema of face, hands or feet, lessened amount of urine, lessened amount of urea, presence of albumin and increase in blood-pressure, and then use every means possible to prevent the toxemia of pregnancy.

When we get more light on the etiology of eclampsia we will be better prepared to prevent and treat it.

THE USE OF THE GIANT MAGNET IN GENERAL PRACTICE*

W. H. LUEDDE, M.D.
ST. LOUIS

The use of magnets (loadstones) for the removal of fragments of steel or iron from the body is a practice at least two thousand years old. It is advised in the *Agur-Veda* of *Sucruta*. In the twelfth century, *Gilbertus Anglicus* is said to have removed an iron fragment from the esophagus. In 1656, *Fabricius of Hilden*, on the advice of his wife, removed a fragment by the same method, from the superficial layers of the cornea.

The modern development of these means for removing metallic fragments, imbedded in the tissue by accident, has been almost entirely within ophthalmic practice. It dates from the introduction of the electro-magnet by *Hirschberg* in 1877.

The original *Hirschberg* magnet was a so-called "hand magnet." It consisted of a small bar of soft iron wrapped in a coil of fine wire through which the current of several galvanic cells was passed, magnetizing the iron core. Into one end of this core tips of various shapes could be inserted. The whole instrument was so small that it could easily be held in the hand. It had more power and greater adaptability than anything previously devised, and became deservedly popular. It was soon replaced by larger ones of the same general type.

Among the modifications of the "hand magnet" was one suggested by *Sulzer*, who thought to get more power by a horseshoe shaped magnet so that the attraction of both poles could be exerted on the fragment.

With fragments nearly round or cubical there might indeed be a gain of efficiency by this arrangement. However, the majority of fragments are slivers, which have a marked longitudinal axis. Where the single pole of the magnet is used such fragments are attracted in their long axis and the resistance of the tissue is equal to that exerted against the smallest diameter of the piece. When a body comes under the influence of a magnet it is polarized. If the positive pole of the magnet is turned toward the object, the negative end of the fragment is drawn toward it and vice versa. The magnetic poles of the fragment are at the opposite extremities of its long axis. When such a fragment is drawn by a horseshoe magnet, both poles of the magnet being directed toward it, the fragment will approach in a direction at right angles to its long axis, manifestly more than doubling the tissue resistance.

Another modification of the "hand-magnet" is the "innen-pol" magnet. In appearance it looks more formidable than a hand magnet, but really is not. The coil of wire is not placed immediately around the bar of iron to be used as a magnet, but in such a way as to include the whole field of operation, theoretically, to magnetize the metal to be removed as well as the iron bar which is to give the direction and force for its removal.

The special value of the "innen-pol" magnet becomes less apparent when we remember that as soon as any particle of metal is attracted by a magnet it becomes magnetized. The awkward coil about the field of operation is super-



Fig. 1.—Author's giant magnet. Tips are of a variety of shapes and may be sterilized by boiling. Height of stand can be adjusted to operating table.

fluous for this purpose. The force with which the fragment within the coil of an "innen-pol" magnet is drawn toward the iron bar in the hand of the operator depends on the relation between the mass of the fragment and the size of the bar according to the well-known law of magnetic attraction.

"Attraction varies directly as the mass of the two bodies and inversely as the square of the distance between them."

Given a fragment of a certain size, the force exerted by an "innen-pol" magnet would be practically no greater than if the same bar were made up as a "hand magnet," while the latter is easier to handle.

* Read in the General Session of the Missouri State Medical Association, at the Fifty-Seventh Annual Meeting held at Joplin, May 12-14, 1914.

A noteworthy achievement was the construction of the very large or "giant" electro-magnet. For the development of a special ophthalmic technic and the demonstration of the greater usefulness of this instrument the profession was indebted to Haab about 1892. Experience with the "giant" magnet has proven it in ophthalmological practice to be a safer and more reliable means for removing metallic particles than the small magnet. Those particles which are lodged in the deeper structures of the eye can be brought forward to a desirable point for

work, because even the smallest bit of iron or steel may set up a destructive chronic inflammation if left within the globe. While such tiny particles may not be dislodged by a hand magnet even when directly in contact with it, this giant magnet has proven successful in every case in my own experience. It was its superior power as demonstrated on a small particle of casting lodged in a crystalline lens for over two weeks—after other so-called "giant magnets" had failed—that led to my purchase of the magnet and its installation at St. Luke's



Fig. 2.—Radiograph of needle in foot, removed five months after accident by means of the giant magnet.



Fig. 3.—Radiographs showing two fragments of needle in foot. Both removed promptly through one incision.

extraction, without the destructive manipulation of a small magnet inserted through an opening into the globe, to which must be added the greater danger of infection by the latter practice.

Not only will the giant magnet "reach" farther for a fragment, but its power to attract a tiny particle of metal is as many times greater than any form of hand magnet as its mass is a multiple of that of the latter. This power to pull a tiny fragment is more important in eye

Hospital, St. Louis, for ophthalmic and general use. The particle after extraction weighed barely 1 milligram on the physiological balances at the Washington University Medical School. Its removal was followed by the recovery of perfect sight. This case demonstrated the superiority of the extra strong giant magnet so strikingly that its efficiency was beyond question.

The magnet (Fig. 1) was constructed under the direction of Dr. P. I. Chandysson of the

Pan Electric Service and Appliance Company, St. Louis. The adjustable iron stand was built by Smith and Davis Mfg. Company, under direction of Mr. B. F. Jones. The core is over 4 inches thick and 2 feet long and is covered by a coil of insulated copper wire several inches thick. A general description and report on its use in ophthalmic practice was published in the *American Journal of Ophthalmology*, July, 1910.

If such a magnet is an absolute necessity to the ophthalmologist, how may it be useful in general practice? Perhaps the record of recent cases will be the best answer to this question.



Fig. 4.—Radiograph showing broken needle near deep palmar arch.

CASE 1.—Mrs. R.; fragment of needle in foot for five months. Attempted surgical removal, after Roentgen-ray localization at time of accident (Fig. 2), resulted in failure and additional disability from wound in sole of foot. Foot more or less painful since, especially when walking. Immediately on exposure of the foot to the magnet, the fragment was definitely localized by the pulling sensation experienced by the patient and the raising up of a flap of skin where it lay. The immediate surgical removal was now rendered certain, but the patient would have no cutting done. It required two exposures to the

magnet of about one hour each on subsequent days and moist packs to soften the scar tissue in which it was encapsulated to permit the broken needle to slip through the tiny opening in the skin, after which the patient could walk home without further discomfort.

Case 1 was a patient of Dr. H. G. Nicks; permit me therefore to insert here his written report of another case in his own practice.

CASE 2.—“We all know how difficult it is to find a needle buried in the tissues, and that failure often attends our attempt at removal, even after the best radiograph. The muscular movements can and frequently do move the small particle away from the location at the time the exposure is made. Even the extension or relaxation secured at the time of operation by the hands of the operator or his assistants will change its position. Anything, therefore, that will locate the metal or limit the amount of dissection necessary will be welcome. This last the magnet has certainly accomplished in my hands. Indeed so successful has it proved that I would have refused to operate without its assistance in my last case where a needle had entered the foot. It had broken and the parts were separated fully 1 cm. (Fig. 3). They were imbedded deeply and yet no difficulty was found in removing both through the same incision. The larger

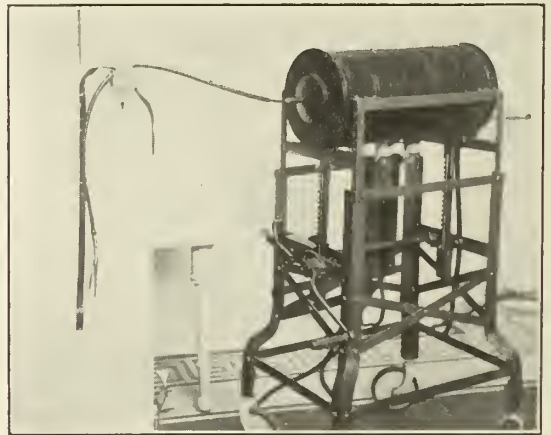


Fig. 5.—Showing “stomach tube” extension tip holding three wire nails over 4 inches each in length at extremity. Tube suspended over door knob at distance corresponding to distance from pharynx to stomach. (Tape line figures indistinct.)

piece was a fraction over 2 cm. in length, the smaller 6 mm. The success attending the use of Dr. Luedde's magnet in my two cases, the one already reported by him and removed under his direction, and this last experience of my own, has fully proved its usefulness.”

CASE 3 occurred in the practice of Dr. H. G. Mudd. A fragment of a needle was so firmly buried in the tendon achillis as to defy the grasp of forceps, etc. Instead of extensive and possibly harmful dissection, two exposures to the magnet with a little manipulation of the tip removed the fragment. Note the importance of repeated trials and the use of manipulation.

Simply to turn on the current will cause the magnet to exert a steady traction on the fragment, but often an interrupted traction secured by rapidly making and breaking the current will dislodge a fragment when steady traction fails. When the fragment has remained in the

tissue long enough to become encapsulated or is imbedded in the bone or tendon, it may require repeated exposures and the use of moist packs during the intervals to loosen it.

CASE 4.—Miss R.; needle entered side of foot, broke off and disappeared while about to retire last night. Exposure to magnet followed by immediate lifting up of skin near the point of entrance and prompt removal through small incision in the skin. Dr. W. C. G. Kirchner gave the surgical attention in this case.

CASE 5.—Mrs. X.; needle fragment forced deeply into palm of hand while scrubbing floor (Fig. 4). Incision after Roentgen-ray localization failed to reveal needle. It proved to be dangerously near the deep palmar arch. After consultation, the use of the magnet was substituted for further surgical measures and was entirely successful in the second exposure. Dr. W. E. Holdenreid gave the necessary surgical attention to this case and made the Roentgen-ray localization.

CASE 6.—Mrs. M.; steel hypodermic needle broke off and disappeared in buttock during a deep muscular injection. One hour later, the physician and patient were both relieved to find that the fragment pushed up the skin under the tip of the magnet almost as soon as the current was turned on. The removal of the fragment required only a small incision through the thick skin of the buttock at this point under local ethyl-chlorid anesthesia.

CASE 7.—Child suffering with chicken-pox had the added misfortune of getting a needle into its foot. Dr. W. A. Hall made an incision without finding it. The use of the magnet in the operating room of the hospital was not possible because contagious cases are not allowed there, but connection was made in the engine room and the patient brought to the back yard. The fragment was lost but a Roentgen-ray photograph proved that it was out.

This case is cited to show that in special cases the magnet can be transported and used wherever a direct current is available. It is, however, much better and usually easier to bring the patient to the operating room of the hospital.

These seven cases happening during the last year are but a part of those in which the magnet might have been used if the advantage of this method were more frequently remembered. A prominent surgeon, on learning of the broken hypodermic needle in the buttock, said: "I wish I had thought of that last week. I could have saved the patient the pain and myself the trouble I had in searching for one."

We have emphasized the value of power in the giant magnet. It must not be forgotten that wherever desirable, this power can be reduced to any desired minimum without losing the control of the direction of attraction, etc., through the increase of the distance from the object by the use of flexible extension tips. These tips can be used about the ear, nose, throat, larynx, trachea, esophagus, etc. They can be used in contact with steel instruments of any sort to reach remote nooks and corners.

One can be swallowed like a stomach-tube, and in this simple manner extract a tack that

may have been swallowed (Fig. 5), avoiding dangerous complications by other surgical measures.

Recent experiences have demonstrated the advantage of making observations with the fluoroscope during the attempt to remove a metallic fragment from any part of the body. We are thus enabled to tell if the fragment responds at all to the magnet without the loss of time and the disappointment after a long unsuccessful exposure. To facilitate these examinations the magnet can be operated in the Roentgen-ray laboratory of the hospital.

Altogether, the timely use of the giant magnet in general practice seems certain to prove itself of value—a boon to patient and physician—in a variety of ways.

314 Metropolitan Building.

OBSERVATIONS ON EXUDATIVE MIDDLE EAR CATARRH

I. D. KELLEY, JR., M.D.
ST. LOUIS

No class of ear diseases deserves more consideration and a better understanding from the general practitioner, and even the aurist, than exudative middle ear catarrh, first, because of its vague symptomatology and seemingly uncertain signs; second, owing to the dire results produced in patients because of the early neglect in recognizing these conditions, and a failure to employ the simple methods of treatment. The essayist has in mind many cases typifying this neglect; children whose hearing became so poor that they were classed as mental defectives; mental defectives, who, after proper treatment, were again admitted to the grade schools; young adults virtually incapacitated, and older persons exhibiting high grade, chronic, adhesive catarrhal processes as a result of early neglect; finally, one patient who lost his life because of this accumulative deafness.

Just what is exudative middle ear catarrh? Many of us are wont to smile at the term catarrhal otitis media, because of its repeated use as a cloak to hide many ear conditions that we fail to account for or recognize. No! Exudative middle ear catarrh is a distinct entity, both clinically and pathologically.

Clinically it is divisible into (1) acute, (2) sub-acute, (3) chronic; pathologically into (1) serous, (2) mucous, (3) exudative catarrhs, the end stage of a middle ear suppuration, (4) chronic adhesive catarrhal process.

Anatomically, middle ear catarrhs occur with a swelling of the mucous membrane, and accompanying this, in beginning cases, a clear bright yellow colored serous exudate. In others, and more chronic cases, different grades of a mucous exudate. Microscopical examination reveals a small number of mononuclear leukocytes and mast cells with many forms of degenerated bacteria, and lastly, a more or less distinct organization of the exudate.

The etiology of middle ear catarrh is quite varied. The most frequent causes are: acute or chronic changes in the nasopharynx, resulting from adenoid vegetations; inflammations of the pharyngeal tubal openings from syphilis, tuberculosis, etc.; hyperemia and catarrhal changes in the Eustachian tubes, producing disturbances in the normal ventilation of the middle ear, leading, sooner or later, to middle ear catarrh; traumatic injuries of the membrana tympani, middle ear or tube; gaseous vapors; middle ear inflammations, and lastly, the reactive inflammation following operative procedures on the ear, nose and throat.

The symptoms of acute and sub-acute exudative middle ear catarrhs are: a rather marked impairment of hearing (1-3 meters for the whispered voice instead of the normal 20 meters) occurring shortly after the onset of the disease, lateralization of the patient's speaking voice to the side affected, subjective noises, together with a feeling of fulness and pressure in the ear, and, when the middle ear is not entirely filled with fluid, a sensation as though water were in the ear when the head is moved. The otoscopic examination serves to differentiate the serous from the mucous catarrhs. The serous catarrh reveals a drum membrane more glistening and with a more intensive light reflex than normal. The yellowish color of the exudate blends with the normal drum color, giving, when the middle ear is filled with exudate, a yellow hue to the membrana tympani. When the meso-tympanum is only partially filled with fluid the lower portion is of a yellowish hue, as compared to the grayish normal drum above, and the line of demarkation is sharply defined by this fluid, meniscus or "Neveau Linie." The otoscopic picture of this line resembles a hair behind the drum, either straight or wavy in contour, and changing position with the movements of the head, because the fluid seeks the lowest level of the middle ear cavity. The picture of a mucous catarrh differs from that of the serous, in so far as the drum has lost its luster and assumes a dull, moist, yellowish, sickly appearance (an appearance of saturation), with more or less bulging of its surface. A "Neveau Linie"

may or may not be present, and if air inflation has been employed large viscid bubbles may be seen behind the drum. The most important clinical finding is the diminution of hearing on the affected side, and this cannot be too greatly emphasized, because of its important relation to the treatment and the simplicity of its use as a test. There is present in these cases a marked diminution in the hearing distance for the whispered voice, and a lateralization of the tuning forks to the affected side. Exudative catarrh as the end stage of a middle ear suppuration presents the otoscopic picture of a serous or mucous catarrh; usually, however, of the latter type, because of the fact that a suppuration passes into the mucous stage before healing. The last and final outcome of these conditions is the chronic adhesive process, with its marked, permanent impairment of hearing, a thick, opaque, retracted drum, bound down to the promontory by interlacing connective tissues bands formed from an organization of the inspissated mucus within the middle ear cavity, and lastly a stenotic Eustachian tube.

To treat these cases properly they must be recognized in their earliest stages, before definite anatomical changes have occurred, in other words, before a chronic adhesive process has been reached. One must not wait until intensive symptoms develop, usually only marked deafness, before beginning active treatment, because then it is too late. As a prophylactic measure against this condition, children exhibiting a tendency to otitic catarrhs should have their noses and nasopharynges put into normal state by the removal of adenoids and correction of abnormal nasal conditions. The catarrhal ear condition itself is treated by air inflation, either by politzerization or catheterization and massage, such inflation being controlled by the hearing distance for the whispered voice. The most important phase of the treatment is when, after inflation in acute and sub-acute cases, the hearing for the whispered voice is not improved beyond one meter a paracentesis must be resorted to, and as often as the hearing distance falls below one meter, thus allowing the serum or mucus to escape through the drum perforation. By means of a constant whispered voice hearing distance control, the middle ear condition is brought back to normal. When a middle ear suppuration has ceased to discharge, and the drum perforation has closed, this does not mean a cure, and this cannot be too highly emphasized. The patient must be treated for his resulting catarrh by inflation and massage, controlled by the whispered voice hearing distance and a

paracentesis when the hearing distance falls below one meter. The treatment of chronic, adhesive, catarrhal processes is most unsatisfactory at best, and consists of dilatation of the Eustachian tube, middle ear inflation and massage, with a possible breaking up of the existing adhesions.

Cases illustrative of above conditions are as follows:

CASE 1.—Serous catarrh. Miss R., aged 17 years. Complained of a feeling of fulness in the ear, tinnitus, crackling upon swallowing, and a feeling of water in the ear, together with a difficulty in hearing on the affected side. Examination revealed a markedly glistening and atrophic drum membrane. A clear serous exudate containing a few air bubbles behind the drum, and an irregular "Neveau Linie." A small tympanic scar was seen in the posterior superior drum quadrant posterior to the short process of the malleus. Hearing for the whispered voice, 2 meters, with lateralization of the tuning forks to the affected side. Catheterization and inflation produced rupture of the scar, followed by a small quantity of clear serum flowing into the external canal. At once a marked improvement in the hearing distance was noted, and recovery was complete after three subsequent inflations.

CASE 2.—Mucous catarrh. M. K., female child, age 6 years. Complicating chicken-pox, child suffered with a middle ear suppuration. In due time suppuration ceased and ten days after, examination revealed a yellow, moist, opaque, sickly drum, with a bulging of the superior and inferior posterior quadrants. Hearing for the whispered voice on the affected side was found to be less than one meter. No improvement in the hearing distance occurred after inflation and massage. A wide paracentesis was done, resulting in a profuse flow of thick, stringy mucus from the middle ear cavity. The following treatment revealed a marked improvement in hearing. Subsequent treatments brought the hearing back to normal.

CASE 3.—Exudative catarrhs, the end stage of a suppurative otitis media. E. H., male child, age 4 years. Profuse suppuration as a complication of measles. Removal of adenoids and tonsils with two weeks treatment caused a cessation of the middle ear discharge. The following day, the examination revealed a healed perforation with a thickened, moist and bulging drum, a marked impairment of hearing. A paracentesis was done and through the drum opening was discharged a thick, mucopurulent secretion. Subsequent treatments produced a complete recovery.

CASE 4.—Chronic adhesive processes. H. R., female child, age 10 years. Treated over a period of one year. When first seen, examination revealed a nasty suppuration of both ears, with intense diminution of hearing, large hypertrophy of adenoids and tonsils, a marked subacute rhinitis and pharyngitis. The child presented a low mental state, the cause of her removal from the grade school into the defective school. She gave a history of repeated ear suppurations and middle ear exudative catarrhal attacks. Removal of adenoids and tonsils, together with the treatment of the nose, throat and middle ear suppuration, and later repeated inflations, caused a cessation of the aural discharge, closure of the perforations, and an improvement of the hearing and mentality. At the expiration of one year the ear drums revealed scars of the former perforations; marked retraction and the drums bound down to the promontory wall

by adhesive bands. The patient's mentality was so much improved that she was again admitted into the grade school. The whispered voice hearing distance had increased from a few inches to 3 meters.

CASE 5.—M. S., male, age 58 years. Complained of deafness and tinnitus. Examination of ears revealed thickened opaque and retracted drums. Tests revealed a marked difficulty of hearing. A hypertrophic rhinitis and a partial stenosis of the Eustachian tubes were demonstrated. The patient gave a past history of repeated colds, fulness in the ears and increasing deafness. Inflation and massage produced practically no result. Patient, while under treatment, expressed the fear that he would be killed while at work, owing to the nature of his occupation and because of his inability to hear well. A few days later he met his death by being run over by a switch engine in the terminal yards.

In conclusion, gentlemen, I want you to draw a mental picture of a young man suffering from a marked impairment of hearing, because of his existing acute middle ear catarrh, and how, with the simple treatment outlined above, his hearing is brought back to normal in an incredibly short time. Picture again this same man grown older, with a deafness beyond repair, virtually incapacitated because of his earlier failure to receive proper treatment.

Humboldt Building.

VALUE OF THE MEDICAL SOCIETY*

W. K. STATLER, M.D.
OAK RIDGE, MO.

The longevity of any organization depends on its efficiency for service. When an institution ceases to serve its early fall is inevitable. This law applies to medical organizations as well as to social institutions.

The time has come in which most medical men believe in the educational value of the medical society. The county societies are the units which build the great American Medical Association.

The important part of a physician's training comes after he receives his diploma. This training is acquired by the systematic reading of books and journals, the observation of patients and the association with medical men. This latter comes in a true and good sense by the attendance of medical societies.

Apathy, indifference and intellectual laziness are the foes of medical progress, and when a physician thinks he can learn nothing at a medical society he has reached a period of self-satisfaction that is opposed to his own as well as to his patients' best interests.

* Read at the meeting of Cape Girardeau County Medical Society, July 13, 1914.

If he says he had rather stay at home or at his office than attend some medical "gab-fest" where some young, inexperienced enthusiast reads a paper on the diagnosis of pernicious anemia or some old fogey reads one on Colles' fracture, when he can read a much better discussion in his Osler, Cabot or new Keen, he is like a man who stays away from church services on Sunday because he has a family Bible at home on the mantle in a fine state of preservation. There is no better means of revitalizing such a growing indisposition than the regular attendance of medical gatherings.

Can the Cape Girardeau County Medical Society serve such a man? Yes. There are reasons why our county medical society should be the leader of Southeast Missouri's medical affairs.

1. I can safely say Cape Girardeau County has the largest number of physicians of any county in Southeast Missouri.

2. The quality is in keeping with the quantity. Our society can boast of having until recently the president of the Missouri State Board of Health. We have had in the past year a member go to New York and other Eastern cities to study diagnosis and treatment of disease. Another one spent months in the great hospitals of Chicago, gathering knowledge from the masters of medicine and surgery. Another member took a sojourn at Rochester, Minn., watching the master hands of the Mayos and their gifted associates doing unrivaled tasks in surgery. Others went to St. Louis, which I rejoice to learn is soon to become a medical center second to none. We have competent men devoting their time to the specialties. We have men who have served their stewardships in the best hospitals in our metropolitan cities. We have men full of years and honors who have grown gray in medical service, and who are yet alert to indorse and practice modern methods as well as to participate in our meetings.

3. The city of Cape Girardeau is the intellectual and commercial center of Southeast Missouri.

4. The Sisters of St. Francis, noble-hearted, self-sacrificing souls, with the help of public-spirited citizens, are erecting in our midst a magnificent new hospital which should serve as an inspiration to the physicians and surgeons of this county to improve in talent and technic.

5. A city the size of Cape Girardeau, as a matter of course, will be the dwelling place of some quacks and irregulars whose sins should be made known to a credulous public by an organized profession. However, I must confess that it is a difficult task to convince even intel-

ligent people that these quacks are really impostors, "for the average citizen in matters medical is little in advance of the ancient Greeks and Romans."

6. A city with the number of physicians as either Cape Girardeau or Jackson, where all our meetings are held, have enough physicians to guarantee a fair attendance if they would all attend, even if conditions were such that no other physician could attend.

7. All roads leading to Cape Girardeau and Jackson are such that it is possible at almost all times of the year to reach these points.

These foregoing seven reasons are enough to indicate why we should have an active society, and I now wish to make a few suggestions how to make it so.

In the first place, a good program is conducive to a good attendance, and this has been ably arranged by the program committee. Now let every one make a special effort to fulfil his part of the program. This committee did not place your name on the program for courtesy sake, but for you to actually take that part.

Another means of creating interest would be the demonstration of more pathologic specimens, and by this I do not mean only uterine fibroids, appendices and pus tubes, but also interesting specimens of blood, urine, sputum, exudates, embryos, etc. Another interesting feature would be the demonstration of patients having chronic valvular heart diseases, organic nervous diseases, interesting skin diseases, etc. From my own locality I could demonstrate patients showing the results of cerebral lesions occurring in childhood, paralysis agitans, a case of locomotor ataxia in the paralytic stage, an interesting case of barrel chest from emphysema, and with some effort I could obtain from a neighboring county a case of the rare disease known as achondroplasia which was shown me some months ago. You physicians could collect many interesting cases which would make instructive demonstrations.

The case reports, as forcibly encouraged by Dr. Wilson, have been highly instructive and interesting. Let these as well as all other good features be continued.

In closing, I can sincerely say that my association with this society has been most pleasant and helpful. While there has not been the degree of activity that there could have been, there have always been enough bright members to keep the fire aglow.

As the year lengthens, let us be mindful of our duties and work to improve our talents. "Let us strive to attain neither great honors nor great riches, but unlimited common sense. Let us learn to love the good, and our neighbors as ourselves."

SPECIAL ARTICLE

REPORT OF SANITARY SURVEY, ST. JOSEPH, MO.*

J. H. WHITE, M.D.
Surgeon, United States Public Health Service

The city of St. Joseph, with the exception of certain relatively small areas hereinafter discussed, lies on high, rolling ground on the eastern bank of the Missouri River, and is, excepting three small areas, naturally well drained. The soil is porous yellow clay underlaid by limestone. The river flows eastward, then south, and then almost west again and the site of St. Joseph is along the crescent so formed.

The high area, were it not for the surface wells and cisterns adjacent to cesspools and privy vaults, as elsewhere noted, could be broadly described as being in all respects fully abreast of the average American city. The low, flat bottom commencing at the foot of Prospect Hill about where Jule Street runs to the river gradually widens to about 300 yards at Atchison Street and to a half mile at Alabama Street in South St. Joseph, and this flat bottom land, naturally unfit for city building, is covered with wretched little "shacks" in much of its northern half and there is always a probability of a general mixing of the contents of cesspools and wells on any occasion of torrential rainfall in this bottom.

Through South St. Joseph runs Brown's Branch, carrying all the rainfall from the high hills around Hyde Park, and at times overflowing the southern section of South St. Joseph, known locally as "Skeeterville," and making it a fact beyond question that the contents of wells and cesspools get thoroughly mixed.

CITY WATER SUPPLY

In company with Col. Joseph A. Corby, of the board of health, and Mr. Taylor, Superintendent of the water company, I visited and inspected in detail the St. Joseph water works, which I will describe in the language of the report of the New York board of underwriters, whose exhaustive and accurate physical description I cannot improve upon.

General outline of system.—The supply, taken from the Missouri River, about 3 miles north of the business center of the city, is raised by low-lift pumps of sedimentation basins and a tank, from which it flows to filters, and then to the clear water basin and high-lift pumps. Distribution is practically in one service with large equalizing reservoir near the pumping station at elevation 308, and a standpipe, ordinarily kept full

and reserved for serious fires at elevation 356. A second reservoir, located on a hill in the southern part of the city, with water at elevation 233, is kept full and reserved for fires, and near it a second standpipe, with top at elevation 310, filled at times of high consumption by a booster station, supplies a small area east of the hill.

Supply works—Source.—The Missouri River, with a watershed above the city covering 425,000 square miles, furnishes an inexhaustible supply.

Intake.—Two cast-iron pipes, 36 and 24 inches in diameter, and about 265 feet long, extend into the river and terminate in riveted steel pipes turned down. The pipes are supported by wooden piles and are equipped with gates and screen chambers. The shore above the intake is protected by rip-rap resting on mattresses.

The intake is located on the bank of the river, opposite a large sand bar, which at low water forms an island. The channel from which the supply is taken has at times been kept open with difficulty. The company maintains a 7,000,000-gallon electrically-operated centrifugal pump for emergency use, which can be mounted on a scow and operated by electrical power generated in an independent plant near the boiler house. Two thousand feet of 20-inch flexible steel pipe is on hand.

Sedimentation basins and filters.—Low-lift pumps raise the supply to two sedimentation basins located about 500 feet southwest of the filter house. These were built in 1898 and 1907, cover areas of 0.78 and 0.84 acres, are 12 and 14 feet deep, and have available capacities of 3,000,000 and 4,500,000 gallons, respectively. They have reinforced concrete walls backed by earth embankment and concrete bottoms, are divided into sections by wooden baffles, and are in good condition. From the sedimentation basins a part of the supply flows to eight rapid sand filters, constructed in 1913, each 12 by 17½ feet; combined capacity 4,800,000 gallons a day. The remainder of the supply is raised by low-lift pumps to a sedimentation tank 60 feet west of the filter house and erected in 1897, of riveted steel, 50 feet in diameter, 20 feet high and holding 293,000 gallons; this supplies fourteen 18-foot, wooden tank, Jewell gravity filters installed in 1897; normal capacity, 9,000,000 gallons a day.

Filter house.—A 2-story brick building, 170 by 54 feet, connecting with the new addition on the south of the same width and 64 feet long. Old section divided into about two equal portions by brick division wall to roof; openings in walls between the three sections unprotected. First floor of old section of concrete and wood; second is joisted; in new section, of concrete. Peaked, slate-covered roofs, on wooden sheathing, rafters, and trusses. Electric wiring defective.

* From Public Health Reports of U. S. Public Health Service, April 24, 1914.

Three small 1 and 2 story brick additions on east side of filter house are used for coagulating, lime and alum rooms; division wall openings between these rooms and filter houses are unprotected.

Clear-water basins.—Located 40 feet south-east of the filter house and constructed in 1897, of earth embankment paved with brick; bottom of concrete. Consists of one basin 100 by 90 feet on the bottom, 14 feet deep, with available capacity of 1,000,000 gallons. Connected with the filters and pumping station is a single cast-iron pipe, 30 and 36 inches in diameter.

The purification not touched upon in the above quotations, is accomplished as follows:

The raw river water is pumped into No. 1 settling basin, entering this basin over a spillway and the heavy mud precipitated at this point. From No. 1, the water flows by gravity to No. 2 basin. The water is treated with alum solution between No. 1 and No. 2. The amount of alum is of course governed wholly by the turbidity of the water. The maximum amount used during muddy stages is $2\frac{1}{4}$ grains per gallon, while during the fall and winter months very little alum is necessary to coagulate the water and the average used during these months is approximately 1/10 grain per gallon of water.

After the water leaves No. 2, the alum basin, it flows through the filters and into a clear-water basin from which it is taken up by high service pumps, into the suction pipes, where the water is treated with a hypochlorite solution, one-eighth pound of the chemical per million gallons of water pumped being used. Lime is seldom used in connection with alum solution as the alkalinity of the raw river water is sufficient to neutralize the alum.

There are 28 filters, the combined capacity of same being $15\frac{1}{2}$ million gallons of water in 24 hours. Of the above filters, 14 are the Jewell type, with a capacity of 9,000,000 gallons per day, and 8 are of cement, recently built and with a capacity of 5,000,000 gallons per day. No. 1 settling basin has an area of 36,575 square feet, with a depth of water of 17 feet. No. 2 settling basin has an area of 31,300 square feet, with a depth of water of 14 feet.

The resultant water supply is fairly clear though at times retaining some stain but no mud, and though hard on account of lime salts held in solution is a good potable water, in which bacterial incidence seldom exceeds 25.

SURFACE DRINKING WATER

An ordinance is in existence which provides ample authority for the board of health to inspect wells, cisterns and springs, and when they find that such waters are unfit for drinking or cooking purposes, to condemn them and forbid their use, and if the board of health receives the

proper backing in the enforcement of this ordinance it will be enforced and will go a long way toward compelling the general use of the city water supply, which is good.

I believe I am justified in saying that it would compel 90 per cent. of the independent water users to take city water, and would meet with the approval of the majority of the people, most of whom now use wells and cisterns for drinking purposes, purely because they cannot get the city water, being tenants and unable to get their landlords to make connections.

A full test of all surface supply as rapidly as it can be made and the compelling of connections with city water mains should remove practically all criticism of the water supply of St. Joseph, and will also, in my opinion, reduce the typhoid morbidity to European levels, as the probability of milk convection is not great.

MILK

General ordinance No. 1366, enacted in September, 1911, provides that all persons or firms selling milk shall obtain from the board of health a certificate of registration good for one year, but there is an unfortunate provision that part of this ordinance is not obligatory on persons selling milk from not more than two cows.

There is also a provision that the tuberculin test is to be applied to all cows employed in the production of milk.

The ordinance demands full and proper precautions with regard to storing, cooling and distribution of milk, and further for the labeling of sterilized and pasteurized milk, and enters into minute details as to what shall constitute a proper pasteurization, providing also for the temperature at which the milk is to be kept after such pasteurization.

There is a provision that no milk shall be sold which shall contain more than 300,000 bacteria per cubic centimeter.

It enters into the necessary minutiae, as to the care, feed, and housing of the cows themselves, and as to the milkers and utensils, and is in every respect a thoroughly good ordinance with the exception named, that any one can keep two or less cows without being subject to any of the provisions of the ordinance except that applying to tuberculin test and to the delivery at houses where contagious diseases exist, and I deem this unfortunate, though perhaps unavoidable at the present time.

Another possible source of criticism lies in the fact that although the United State Government score card is used for scoring dairies and milk depots the minimum score is not high enough and should be raised to 60 minimum.

The board earnestly endeavored to provide for certified milk, but could not, the demand for such milk at the necessary increase in price being

insufficient to justify its production, but even without this, it is only fair to say that the strenuous efforts of the health board have resulted in good milk supply.

FOOD INSPECTION

An ordinance provides for the inspection of food and drink and prohibits the sale of unwholesome products, but the ordinance does not provide for covering to prevent the contamination of articles of food placed on sale, but section 4 of the food and drugs act of the State of Missouri (H. B. 275) provides for this matter, and ordinance 1154 of the city gives authority to the clerk of the board of health to enforce all pure food and drug laws of the State, thus covering this hiatus.

The enforcement is fairly good and though some meat, grocery, vegetable and fruit stands do not obey the law and some only in a perfunctory way, the fact remains that many do obey the law, and I am sure that the board will secure real obedience as soon as they can obtain the essential support of the law officers in punishing infractions of the code, and I believe present efficiency would be served by employing an additional inspector in this department.

GARBAGE AND WASTE

Section 3 of General Ordinance No. 834 provides for the removal by private contract of all waste materials, including garbage and night soil, from all premises in the city, but unfortunately only inferentially orders the separation of these different characters of waste and does not specifically order their separation, which, as later shown, is most desirable.

This ordinance does not accomplish entirely the end for which it was framed, nor does there seem to be any reason to believe that anything short of the vesting of complete authority in the board of health to have this work done at the actual expense of the city can attain this end, and in my opinion a law which would provide for this would subserve both economy and efficiency.

Taking these matters in detail, we find the following conditions, which all show the imperative need of a full and complete separation of the different objectionable materials to be removed.

Ashes are in some instances separated, in others not separated, from other material. If separated they are susceptible of use as filling, and under such conditions offer no sanitary hazard. The same is true if mixed with ordinary trash, but not true when mixed with decomposing animal or vegetable matter, and it is unfortunately true that under existing conditions one may occasionally see dead rats and chickens mixed with trash, rags, garbage, horse manure, and ashes all in one pile. This is not by any

means the rule, neither is it an entirely uncommon spectacle.

Stable manure is at present supposed to be carted to the city dump, and should always either be carted there and covered with a deep layer of earth as soon as possible, unless taken out to the farms, where it can be used, or incinerated, which last at present is not practicable.

Night soil, of which vaults and cesspools furnish a very considerable quantity, should be and is chuted through a special construction into a sewer provided therefor at the dump, and thus handled adds neither more nor less of danger to the river than other sewage thrown in from the house drainage system.

Ordinary dry waste, such as tin cans, paper, small boxes, and the endless number of small articles daily thrown away, offer a purely mechanical problem in this latitude, and if not burned can safely be dumped into any place offering filling, and if covered there with earth need no further problem.

Garbage.—Kansas City, Providence, Denver, Omaha, Colorado Springs, and other cities have their garbage fed to hogs, with the uniform result that the cost of the removal is reduced to some extent to the city and that the contractor, according to his business capacity, is able to make more or less profit from the feed so obtained. There is no danger in this system under proper handling. Any supposed danger to the hogs can be prevented by prompt handling of the garbage to prevent unnecessary fermentation, and by use of the hog cholera serum to prevent disease. The proper cleaning of the pens, if in the city, eliminates any danger to man.

The system in use at Providence for the past 20 years is entirely simple, the hogs simply running at large on a farm outside the city, and doing handsomely without any precaution of any kind, their ordure being broadcast over several hundred acres.

The board recommends this system, and I heartily concur with them that it offers the best available solution of the garbage problem.

The separation of garbage is, of course, absolutely essential to putting into effect the system proposed.

The dump, although unsightly, need not be and is not insanitary, provided garbage and night soil are cared for as suggested under the heading above, for the reason that the dump will then be reduced simply to dry waste material and stable manure, and if all were covered with a heavy coating of earth or of sand thrown up from the river, the whole transaction being behind cribwork, the net result would be the accumulation at that point of valuable land without any sanitary risk.

Dead animals are disposed of in a thoroughly satisfactory manner by contract with a rendering establishment.

REGULATIONS OF PRIVY VAULTS AND CESSPOOLS

City ordinance No. 1426 compels connection with sewers in the limited area between Main, Jule, Twelfth and Lafayette, known as the sanitary district, and this is very thoroughly done.

Elsewhere it is unlawful to build cesspools and vaults and use the same except by special permit, and under certain conditions as to method of construction, which method, while in the main indicating good water tight construction, does not guarantee that this water tightness will continue and that soil pollution may not supervene at any time.

From time to time the board of health has discovered *B. coli* in some of the surface wells, and it is easy to see that it could hardly be otherwise in shallow wells and cisterns close to cesspools and privy vaults and separated therefrom only by a few feet of porous yellow clay and a thin and easily cracked wall of brick and cement and in many instances of cement alone applied direct to the sides of the cistern, cesspool, or vault with no pretense of brick wall.

There is a very large percentage of such conditions (juxtaposition of privy and well) all over the city outside the sanitary district of about 88 blocks above remarked upon.

The removal of night soil from privies is done in ordinary dump carts to the sewer chute at the dump, the material being too solid for odorless excavators.

While about 90 per cent. or perhaps more of the better class of residences in the city are connected with sewers, there remains in cases of the less well-to-do households more than 50 per cent. unconnected and having to depend upon these cesspools and vaults, and this in view of the fact that wells to supply drinking water are as above stated dotted all over the city, is an insanitary condition urgently calling for correction and fully appreciated by the board of health.

I have suggested to the board of health the use of Uranine A. to test whether or not the privies pollute the wells or cisterns in any locality, as the vivid physical proof given in this test is beyond controversy (the most convincing argument ever put before the laity) and such proof as will assist the board in compelling immediate water and sewer connections in all such cases.

SEWERS AND DRAINS

The city is provided with six main sewers of large dimensions and three of moderate size, all discharging into the Missouri River direct. All of these in turn receive the effluent from many smaller laterals.

The system is practically coextensive with the city limits except in that part of South St. Joseph which is known as Hyde Park and the other portion of South St. Joseph below Alabama Street, derisively known as "Skeeterville."

and a small portion northwest of the railway tracks and north of South St. Joseph known as Florence. It is probable that these three sections will be sewerred in the near future and there will no longer be any reason for failure on the part of the property owners to make sewer connections.

As indicated by the course of the main sewers, the natural drainage of the city of St. Joseph is, with the exception of the flats along the river in the upper part of the town and the whole flat area between South St. Joseph and the packing houses below the city, as good as one could possibly desire, the high hills rolling into long sloping valleys, making this natural drainage over all parts of the city having an altitude of more than 25 feet above the river exceptionally good, and the city has provided a sewer system which in all its ramifications covers a distance of over 100 miles, and is under most conditions of sufficient caliber to carry off both storm water and sewage, the system being a general one in which these two factors are not divorced, as they always should be. The necessity of divorcement for sewer and storm drains is most patent in South St. Joseph, in parts of which the ground is so flat that at times when the sewers are surcharged with vast volumes of muddy water coming down from the higher districts on the hills it is impossible for the house drainage to find egress and sewer gas if not worse is forced back, making an exceedingly undesirable situation.

Another matter worthy of consideration, but not in any sense a criticism of the sewers themselves, is that the sewers are used for house connections to such a limited extent as to nullify a large part of their usefulness, and despite the earnest endeavors of the board of health the only section in which there is complete water and sewer connection is the relatively small area bounded on the north by Jule, east by Twelfth, south by Lafayette, and west by the river and Main Street, an area which does not stand for more than one-tenth of the total area of the city, and as a consequence of this lack of connection the whole city, including some of the best residence sections, is dotted over with cesspools and privies, many of which are in very bad condition; and this situation is the more to be deplored when it is remembered that in hundreds of premises surface wells furnish the water supply and the soil is sufficiently porous to permit easy access of foul matter from vaults into wells.

In this connection I can conceive of no one idea which put into execution would do more to correct this difficult and dangerous situation than the extension of the sanitary district before mentioned to cover as much of the central portion of the city as may be possible at this time. This I deem an immediate need second to none save the proper disposal of garbage, with which question this is inextricably interlocked.

CARE OF CONTAGION

The board has an unusually good pesthouse for smallpox, but, as is too frequently true, little or no provision for isolation of suspects at any time, and since the withdrawal by the police of authority to use isolation quarters over the police station, they have no provision whatever for isolation of suspects from smallpox or any other infectious or contagious disease pending definite diagnosis.

The St. Joseph's Hospital in contracting for the care of city patients should provide for suspects and even for the care in toto of everything except smallpox, as is done as a matter of course elsewhere, and to which there can be no reasonable objection if an isolation ward or wards are provided, and it would seem that such an arrangement would not only be satisfactory from a sanitary standpoint, but would be mutually profitable.

The system in use by the board for collecting information of the existence of infectious disease is the post-card notice supplemented by telephone call, first as to occurrence of case, second as to disappearance of symptoms and readiness for disinfection.

The board uses a warning notice to physicians who fail to report, and this notice removes all question of ignorance of the law.

This system is very simple and complete and in connection with a fortnightly bulletin issued to the profession makes up one of the most easily handled and easily searched records I have seen.

POLLUTION OF PUBLIC PLACES

Spitting in public places and on sidewalks is forbidden by ordinance and the enforcement of this is excellent.

Despite the fact that alleys are occasionally dirty, the streets of the city are in the main clean and in the sanitary district very clean.

COMMON USE OF CUPS, TOWELS, ETC.

The State law forbidding the use of common drinking cups and towels is by order of the board of health in force here and very effectively executed.

PUBLIC CONVENIENCE STATIONS

Three places are provided for women's emergency use and serve an excellent and very real sanitary purpose. There is no such place for men, who are therefore compelled to resort to barrooms or the like.

THE SOCIAL WELFARE BOARD

The social welfare board is a new board created by act of legislature of 1913, was organized in June of the same year, and secured for executive secretary a trained social worker to assume office April 1, 1914.

This board comes in first contact with much of the infectious disease work of the city, as it is the official body which cares for the dependent sick.

It is made the duty of this board to transfer to the board of health all such cases as soon as the diagnosis is established. These boards cooperate fully.

The law says that the welfare board shall have power to protect the general welfare of the poor by sanitary reformations and specifically mentions insanitary housing.

This board, therefore, has the opportunity to do much fundamental work along the lines of preventive medicine, and the indications are that it appreciates this fact and will act upon it.

The fact that this board consists of public-spirited citizens and is headed by Dr. Daniel Morton, who has at all times manifested a profound interest in public welfare, giving freely with his fellows of his time and work without any remuneration whatever, is a guaranty that the work of this board will be very effective.

SUMMARY AND RECOMMENDATIONS

The city board of health as now organized consists of three members, one of whom is president and executive officer, and all of whom take an active personal interest in the administrative functions of the board. No one of these gentlemen receives a dollar of compensation and therefore the city stands in the light of receiving charity from its own public-spirited citizens, or else getting a pretense instead of real service. It happens that this board renders real and most efficient service and therefore that this very wealthy city stands in the unenviable light of not paying some of its most efficient officers for faithful effort to keep the city in sanitary condition with an entirely too small allotment of funds.

That the good work can continue under such a system is beyond belief, and there is only one possible way to provide the city with a surely and continuously good health system, viz:

The provision of a budget of not less than 50 cents per capita of population for the board of health and the employment of a commissioner of public health with compensation sufficient to justify the giving of his whole time to the services of the city.

The commissioner of health should give his whole time to the work in order that no detail of any matters named in this report and recommendation may escape his notice and that the smallest as well as the greatest of the city's sanitary interests shall have prompt and effective attention.

Such attention will take every moment of his time and not permit to him any practice of medicine or surgery, either public or private.

The board of health under these conditions can then give the city the benefit as now of their mature judgment, but would have no administrative work thrust on them as now happens.

It is perhaps superfluous to state that full time salaries are paid by many cities smaller than St. Joseph and less wealthy, but this is done by Savannah, Ga., which with less than 75,000 people pays its health officer \$3,600 per annum, and an even smaller community, North Yakima, Wash., which pays its health officer \$4,000.

Such an appropriation as I have suggested would provide for the additional inspectors needed, as well as for the pay of the commissioner of health.

Finally, I can not too strongly emphasize the necessity for support of the most real and active sort by the law officers to the health officers.

The administration of public health may have been of slight importance in villages in years gone by, but in the modern city of to-day, lapses caused by ignorance, indifference or inability to enforce a law, may have calamitous results. Unchecked use of polluted milk or water might easily cost St. Joseph a thousand lives and two thousand times that many dollars.

This is the responsibility which the people of any city must face and is a distinct possibility always in the absence of a strong health organization.

Water.—The supply furnished by the water works company is good potable water and is used by approximately 75 per cent. of the people. The remainder use water from wells and cisterns, many of which are of exceedingly doubtful character. The proper and only solution of this question is prompt and vigorous action by the law officers of the city to enforce the ordinance closing polluted wells and cisterns.

Milk.—The milk supply of the city on the whole is good, and great care is exercised by the board to maintain the quality. No comment is required here beyond the suggestion that the score-card minimum be raised to 60 in a possible 100.

Food products are inspected under State law and the condition, while not ideal, is as good as could be obtained without a greater inspection force. Betterment can be obtained by employment of an additional food inspector and vigorous enforcement of the State laws.

Sewers are as good as the conjoint system of sewer and storm drain can ordinarily be and are fairly sufficient in extent and are being extended all the time.

Privies and cesspools are far too numerous and constitute, like garbage, one of the most serious problems confronting the board.

No effort should be spared toward enforcing sewer connection and it is the manifest plain duty of the city common council to extend the sanitary district and to do so at once.

Garbage and waste present one of the most serious problems which the board has to face, and

conditions here, through no fault of the board, are undeniably bad and need correction.

The remedy is separation into—

Ashes, to be used as filling or dumped.

Trash, to be used as filling or dumped.

Manure, to be carted to farms or dumped.

Garbage, to be fed to hogs, collection being made by the city through its own agencies.

TABLE OF PERCENTAGES OF CONDITIONS IN THE LESS SANITARY DISTRICTS

Locality	Using city water	Using wells	Using cisterns	Having sewer connections	Disposal of—	
	Per cent.	Per cent.	Per cent.		Garbage and manure Per cent.	Trash. Per cent.
St. Joseph proper..	91	2	7	40	70	75
South St. Joseph...	55	35	2	1	47	57
Skeeterville, Florence and Hyde Park	48	27	1	.....	48	52

Night soil is very well disposed of if it must exist, but should be eliminated entirely by a complete connection of premises and sewers.

HAIL, DR. GEORGE HALLEY

One of the pleasant occasions that make life better worth the living was the gathering of a goodly number of the members of this society at the residence of Dr. George Halley on the evening of November 10 to felicitate the doctor on having reached his seventy-fifth birthday. Our secretary had displayed his usual good taste in the selection, on the part of the society, of the floral decorations. Dr. Halley was in a very happy mood, greeting friends, old and new, with his customary cordiality and discussing with the utmost animation questions of local interest, of the war in Europe, or of whatever might come up.

Dr. Halley came to Kansas City in the year 1870 and engaged in the general practice of medicine and surgery, for in those days a doctor was a doctor and not just a specialist. He was supposed to know something about the ills of the human body generally, not confining his attention, for example, to the umbilicus or the perineal raphe. The year after his arrival Dr. Halley was made Demonstrator of Anatomy in the Kansas City Medical College in which capacity he showed an enthusiasm as a teacher and a fondness for hard work such as is seldom equalled. Naturally his attention was given more and more to surgery and finally he confined himself entirely to that department, being professor of surgery first in the Kansas City Medical College and then in the University Medical College of this city, and becoming well known throughout the surrounding country as a most competent surgeon.

A few years ago, after a serious illness, Dr. Halley was practically retired from active practice for a time, and then, when he was again hoping to be able to take his place in the ranks of active workers, about two years ago, he was so unfortunate as to be run into by an automobile and suffered serious injury to one foot as well as becoming a victim of a neuritis which sorely tests the endurance of the most heroic spirit. His courage and good cheer in the midst of these most trying conditions calls forth the sympathy and admiration of his colleagues and they are glad to convey to him the assurances of their high regard and their best wishes for a speedy restoration to health.—*Bull. Jackson County Medical Society.*

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EDITORIALS

DIPHThERIA REDUCTION

With diphtheria more or less prevalent throughout the state and the mortality of the disease relatively high, it seems timely to reflect upon some well-known facts about this treacherous contagion, for the knowledge thus gained, if put into practice, will certainly reduce both the frequency and the mortality of the disease.

We must quit "guessing" about sore throats. Every sore throat is presumptively diphtheria until disproven. How will one prove it? Physicians should always carry in their grips a tube of sterile Loeffler's blood serum, a slender spoon curet or a stiff platinum wire loop. On seeing a case of exudative sore throat, get a piece of membrane or a lump of exudate with the tools mentioned above, and after smearing in the ordinary way the surface of the Loeffler's blood serum, deposit the residual bit of membrane or mass of exudate on the wall of the tube. This is advisable because it is usually possible with gross particles of exudate to make an immediate diagnosis from the stained smears of the diphtheritic nature of the infection. Using the time-honored cotton swab ordinarily secures the very superficial layer of the matter, which is so rich in many types of secondary invaders that the direct examination of stained smears fails to reveal the relatively few diphtheria bacilli. It must be remembered that the diphtheria bacilli reside in the depths of the membrane in practically pure culture, and that when smears are made from this region the Klebs-Loeffler bacillus is just as distinctive as those obtained in culture. By taking the material as advised we have the planted blood serum tube to fall back on for further confirmation of the diagnosis. The stains giving the best results are Wright's blood stain and Ponder's stain. All are familiar with the former and its mode of application; not so many know of the latter, which has the excellency of extreme simplicity of application and the distinction of staining the diphtheria bacillus and its polar granules brilliantly while all other organisms stain more or less faintly thus bringing out our object of quest distinctly. The formula of Ponder's stain is as follows:

0.2 gram	toluidin blue.
1.0 c.c.	glacial acetic acid.
2.0 c.c.	ninety-five per cent. or absolute alcohol.
100.0 c.c.	distilled water.

To apply this stain one has only to place a drop of it on a thin *unfixed* smear of suspected matter and cover with a thin cover glass; after standing for a moment take up with a blotter applied at the edge of the cover-glass the excess stain so that the cover rests close to the slide. Then examine with the one-twelfth oil immersion lens. By this method the writer has been able to diagnose correctly the vast majority of diphtheria cases and save much time.

When in doubt either clinically or microscopically always administer antitoxin and find out afterward what the case is. By all means find out, because such information is very important to everyone in direct contact with the patient as well as to the public at large. To overlook the first case in a school or a community is to breed a slimy brood of poisonous snakes that will certainly fasten their fatal fangs at the throats of many helpless little children.

As to the proper use of antitoxin: Forget your prejudices based upon casual observations and embrace the facts as worked out by observers who are in position to obtain them from both experimental and clinical experience conducted on a large scale and carefully controlled by precise methods. Dr. Park of the New York Research Laboratory, writing in the *Boston Medical and Surgical Journal*, Jan. 16, 1913, showed that the constant disposition is to use large initial doses of antitoxin; and to use the intramuscular in preference to the subcutaneous injections in grave cases. These modes of use are based upon the following experimental facts:

First: As to the 10,000 units dose, it appears that twelve hours after this dose a child's blood contains $1\frac{1}{2}$ units of antitoxin per cubic centimeter of the patient's blood; at the end of twenty-four hours $2\frac{1}{2}$ units; at forty-eight hours $3\frac{1}{2}$, and at seventy-two hours $4\frac{1}{2}$ units. At the end of the fifth day the antitoxin content is at its highest tide. The size of the patient is a factor as well as the capacity possessed by the patient to manufacture his own antitoxin. This capacity varies greatly in different individuals; most children manufacture very little, exceptional individuals much. On account of greater susceptibility of children to the toxin it is the safe and proper practice to give them more antitoxin than their size would indicate comparatively to the dose for an adult. About one thousand times as much antitoxin is given as would be necessary to neutralize the toxin present if it were out of the body and in a test tube. This because we must have a great

excess of antitoxin to accomplish the withdrawal of the toxin from tissue cells where it has already become more or less firmly fixed.

The advantage in a large single initial dose is seen by the following experiment: Two goats were taken for experiment. The first animal received 15,000 units at one injection, the other animal received four injections of 5,000 units at eight-hour intervals. At the end of eighteen hours the first animal showed 12 units per cubic centimeter of blood, the second goat presenting but $3\frac{1}{2}$ units. At the end of the third day both animals showed equal amounts of antitoxin content per cubic centimeter of blood. Thus we see that the second animal presented but one-third the amount of antitoxin during the first day that was enjoyed by the first animal.

Intramuscular injections demonstrate that four or five hours following injection there is from five to twenty times the antitoxin in the blood as is present after subcutaneous injections. More prompt than either of these is the intravenous injection, for many observers have confirmed the fact that six hours after suitable doses of antitoxin administered intravenously 20 units per cubic centimeter is present in the blood, and that eight hours following the injection the content begins to diminish. Thus we see the necessity of combating malignant or tracheal diphtheria by intravenous administration.

With these facts in mind we should use our antitoxin in large doses at the outset, choosing the intramuscular mode of administration in all ordinary cases and fearlessly choosing the intravenous route in dangerous ones where immediate effect is necessary. By using a rubber tube or bandage as a tourniquet, not too firmly applied, one can almost always bring a vein into plain view at the bend of the elbow. When this is feasible, warm the serum, cleanse the skin over the vein with soap and water, followed by alcohol, puncture the vein with the syringe needle, withdraw the piston of the syringe slightly, when, if fairly in the vein, blood flows back into the syringe; now release the tourniquet on the upper arm and slowly inject the serum. Five thousand units administered this way is worth twenty thousand injected subcutaneously—and worth it right now, not tomorrow. If you cannot get into an arm vein, try the jugular. You will not harm the patient by using any vein available. We have knowledge of three apparently moribund patients that were saved during the past two months by this method of administration. The method was attended by no more serious reaction than a chill which was of short duration and of no consequence. Remember that when a desperate case is encountered you are fighting for a

life and prompt and decisive action is called for and demanded. By treating cases along these lines intubation and tracheotomy will seldom be called for, but if those measures are needed employ them.

Immunization of all contacts is imperative. For this purpose two-thousand units subcutaneously administered is the preferred method. One thousand units, on account of the small amount of serum, is more likely to sensitize the patient and less likely to completely immunize; moreover the one thousand units dose is eliminated too quickly.

Let us not have so much diphtheria and let us save more of those who have it.

THE CARE OF THE FEEBLE-MINDED IN MISSOURI

According to J. Alexander Johnson, an authority by years of experience on the subject of the feeble-minded, there are really three distinct classes:

1. The idiot with a mental age of 2 or under, for whom nothing but asylum care can be provided. They are often completely helpless, both physically and mentally, and cannot be trained even to take care of themselves.
2. The imbecile of mental age from 2 to 7.
3. The moron of mental age from 7 to 12.

The two last classes, after careful continued instruction and training can be developed mentally to a state that would amount to about self-support. They can be taught to do many useful things and perform them in a very satisfactory manner; dish-washing, scrubbing, different forms of housekeeping, washing, ironing, gardening, grass cutting, are some of the things they can be taught to do. Practically nothing can be done in the way of educating these unfortunates in the sense that we educate the normal child. It is useless to attempt to teach them to read, spell, etc. Their training should largely be hand work.

Our state institution at Marshall is now taking care of these three classes of unfortunates, but owing to the exceedingly crowded condition of the Colony it has not been possible to develop the intensive side of the care of the feeble-minded. The institution being only half completed, the separation of the sexes on both sides of the central building is impossible. As soon as the completed scheme is carried out, separation of the inmates can be made.

Missouri is now taking care of but one feeble-minded person in every 7,000 inhabitants, whereas statistics all over the country prove that there is one feeble-minded to every five hundred.

With over 800 on the waiting list at Marshall, and with 486 in the institution, and the institution only half completed, it will at once be seen that the most urgent action is necessary. If the next legislature appropriates \$300,000 this institution can be completed. This is the most expensive part of the work. At this central plant the moron and the imbecile can be trained. On the other end of the farm small unit houses can be set up where these trained inmates can be utilized in clearing land, removing rocks and bringing waste land to a condition of usefulness. Thus, waste land is made good land through the slow, painstaking and intelligent efforts of waste human material.

In addition to appropriating the money to complete the Colony for the Feeble-Minded, two things should be done:

1. Put a representative on the Board of Managers from one of the larger cities of the state, so that the vocational and educational training of the inmates may be properly and intelligently administered.
2. Appoint a representative of the medical profession so that the physical and mental condition of the inmates may have proper attention from the standpoint of the Board. As at present constituted, neither the educational nor the medical professions are represented, and all of the present members come from the smaller communities.

MISSOURI CAMPAIGN FOR ADDITIONAL CARE FOR THE FEEBLE-MINDED

According to government figures for 1912, Indiana made provision for twelve hundred feeble-minded; Iowa for fourteen hundred; Minnesota for fifteen hundred; Ohio for seventeen hundred, while Missouri had in her one institution the small number of four hundred and fifty-three.

The state institution is located at Marshall, is only half finished, is over-crowded and has a waiting list of over eight hundred. Realizing the urgency of the situation, public-spirited citizens interested in the care of the feeble-minded, have endeavored to carry on an educational campaign which would cause the next legislature to complete the institution. Three hundred and thirty persons have been found in Kansas City and four hundred and nine in St. Louis, who should be in the institution at Marshall, and whose names are not included in the eight hundred now on the waiting list.

As a part of this campaign, Mr. J. Alexander Johnson, for a number of years Secretary of the National Conference of Charities and Corrections, and now connected with the well-

known Vinland New Jersey School for the Feeble-Minded, made addresses in Springfield, Kansas City, St. Joseph and St. Louis during November, which impressed his hearers with the necessity for enlarging our Colony for the Feeble-Minded.

1915

The outlook for 1915 is perhaps the brightest in the history of the Association since the reorganization in 1903. The spirit of co-operation is permeating every nook and corner of the state; the determination to eradicate evils that have cast a cloud upon the real purposes and objects of the profession is stronger and more wide-spread; the county societies are meeting with commendable regularity and profitable discussions on well prepared programs are the rule.

In public health matters the county society is the chief factor for giving direction and forcefulness to meetings whose object is to instruct the public on preventive medicine, hygiene and sanitation.

Altogether the philanthropic objects of organized medicine are being rapidly consummated and the people as well as the physicians themselves have been greatly benefited.

A few counties are still somewhat slow and indifferent about holding meetings but we have assurances from them that they will take on new activity and enter into the spirit of society work which they readily acknowledge is the most effective method of increasing their usefulness to the people and enlarging their own capacity for doing good.

ROLL OF HONOR OF COUNTY SOCIETIES

The secretary wants to create a roll of honor for county medical societies, the only condition for eligibility being full paid up membership of the society. There has been quite a little competition in the past for the honor of being the first society to send the roster and assessment to the State Association. Howard County has earned this distinction for several years but lost it by a margin of only one day this year, Saline County having sent its assessment on November 12 and Howard County November 13. These two were closely followed by Wright, Lawrence-Stone and Wayne counties. In none of these, however, has the assessment of the entire membership of the county society been paid. During 1914 quite a number of the county societies earned the distinction of having remitted for every member before the close of the year.

The roll of honor will be published in *THE JOURNAL* and as soon as a county society pays for all its members the name will be published under this head.

Which society will be the first to earn this honor?

DUES FOR 1915

County society dues for 1915 should be paid now. Do not neglect this important duty, for only by prompt attention to this obligation can members enjoy the benefits and privileges accruing to those who are in good standing.

At the last annual session the House of Delegates amended the defense law so that members who have not paid their dues by the first of April thereby deprive themselves of the privilege of defense in any suit brought by patients treated during the period of delinquency. In addition to this loss delinquent members are subject to deprivation of Fellowship in the American Medical Association and of all other privileges and honors in their local societies and the State Association.

We direct attention to these matters simply to remind the members of the duty they owe to themselves and to the organization and to impress upon them the importance of attending to the matter promptly.

NEW MEMBERS

During 1915 we shall endeavor to publish from month to month the name of each society which elects new members and the total number of new members admitted.

This is the time to take in new members for those who are elected in December will not be required to pay 1914 dues but will be received in full membership as soon as elected on payment of 1915 dues.

In nearly every county there are some physicians who are eligible for membership although the number is not large. Our total membership at this time is 3,079, a few of whom are delinquent for 1914 although the number in that class at this time is vastly less than it was a year ago. This is due to the unfaltering loyalty of the county society secretaries and the assistance of the councilors and members who take an active interest in county society work. It is a record of efficiency of the secretaries that the officers of the county societies and of the State Association are proud to acknowledge. Members are urged to canvass the physicians in their immediate neighborhoods and try to bring into the society those whose conduct and qualifications entitle them to fellowship in the organization.

Let us make 1915 the best year in our history.

END OF VOLUME XI

With this issue we close Volume XI in order to make the official publication correspond with the fiscal year which is identical with the calendar year. This volume therefore includes only six numbers, July to December, inclusive. In future the twelve numbers will run from January to December, inclusive.

We take this opportunity of thanking the members throughout the state for their earnest support of *THE JOURNAL*. There is a wide field of usefulness for our official publication but its high mission in promoting the welfare of the organization and extending the influence of the profession among the people can be accomplished only through the sincere and loyal support of every member.

OBITUARY

MALCOLM D. LEWIS, M.D.

Dr. M. D. Lewis of Columbia, a graduate of the Medical Department of the Missouri State University, 1875, and a member of the Boone County Medical Society and the Missouri State Medical Association, was found dead in his office, October 22. He was 69 years old.

JOHN B. BRIERLY, M.D.

Dr. John B. Brierly, for almost twenty-seven years a practitioner in Gunn City, Mo., died Nov. 20, 1914, at the German Hospital, Kansas City, Mo., from myocarditis. He was born Nov. 18, 1861, in Syracuse, Mo. He graduated from the Missouri Medical College, St. Louis, Mo., in 1888. He was a member of the Cass County and the Missouri State Medical Societies.

WASHINGTON E. FISCHEL

Washington E. Fischel was born in St. Louis on May 29, 1850. He was graduated from the St. Louis High School in 1868 and 1871 received the degree of Doctor of Medicine from the St. Louis Medical College. He served as intern in the St. Louis City Hospital in 1871 and then spent several years in Europe at the universities of Prague, Berlin and Vienna, returning to St. Louis to begin practice in 1874. Always actively interested in the work of medical education he held the following teaching positions: Lecturer on Therapeutics, Professor of Hygiene and Forensic Medicine and Professor of Clinical Medicine, St. Louis Medical College, 1881-1899; Professor of Clinical Medicine, Medical Department, Washington Univer-

sity Medical School, 1911 to his death, which occurred on Sept. 15, 1914. During his long connection with the medical school, Dr. Fischel took an active part in the councils of the faculty and his earnest desire for the improvement of medical education, and his strong convictions as to how this could be attained, had much to do in shaping the policy of the school.

He was consulting physician to the St. Louis City Hospital, 1881-1909; chairman of the medical staff, Barnard Free Skin and Cancer Hospital, 1905, till his death, and for many years a member of the medical staff of St. Luke's Hospital.

These are the mere statistics of Dr. Fischel's professional career. Of themselves they tell of an active, successful one, but they are silent as to the trials and difficulties of his early life and the forceful industry and professional ability by which he acquired an extensive practice and won so high a place among the internists of the country.

To a very unusual degree Dr. Fischel commanded the loyalty of his patients. His professional skill won their confidence and his personal magnetism and charm their esteem and friendship. He was truly the "family doctor" whose patients were his personal friends.

He was a man of broad interests. Although medicine was his life work, and he was always keen to further its progress, and to keep abreast of its advancements no worthy civic undertaking nor any commendable philanthropic or educational enterprise failed to secure his earnest cooperation or support.

In the death of Dr. Fischel, the medical profession of St. Louis lost a leader whose memory should stimulate to higher ideals of living and doing.

The subject of this memoir served the St. Louis Medical Society as recording-secretary in the year 1878, and filled the office of treasurer during the years 1880, 1881, 1882, 1883 and 1884, and those who best knew his busy and useful life, can testify to the interest shown by him in its every legitimate interest and work.—*Bulletin*, St. Louis Medical Society.

JEROME KEATING BAUDUY

The subject of this memoir was born on the Island of Cuba, Aug. 10, 1842, and died at Buffalo, N. Y., Oct. 10, 1914.

He received his preliminary and classical education at Georgetown College, D. C., and at the University of Louvain, Belgium. He took his degree in medicine at the Jefferson Medical College, Philadelphia, early in the Civil War period, and saw his first military medical service with the army of the Potomac, in the second

Bull Run campaign. Later he was attached to the personal staff of the Commander of the Army of the Cumberland, serving in Tennessee and Georgia.

After the close of the war he came to St. Louis, and began private practice, having married Miss Bankhead of Nashville, Tenn., and soon became a member of the faculty of the recently reorganized Missouri Medical College, taking the chair of diseases of the mind and nervous system—a department of medical teaching which at that time, was only beginning to exhibit the importance that it has since attained, both scientifically and clinically, especially in the west.

In the course of his college teaching, his fine address and abilities as a lecturer tended to fill the benches with an interested audience, his style as a teacher being very fluent, imaginative, ornate and discursive, the instruction sought to be conveyed often, however, going over the heads of the students through the free use of technical terms, and difficult distinctions peculiar to the unfamiliar specialty in question, but the felicities of manner and animation of expression prevented any relaxation of attention given to the speaker.

As a clinician serving the Municipal Hospitals and other institutions for the sick or insane in his special line of work, and also as an internist demonstrating the methods of physical diagnosis before classes of students he deservedly stood high, the interpretation by him of the complexus of conditions presented at the bedside, being recognized by those qualified to judge as alike scientific and sagacious.

In the rôle of general practitioner and family physician in the earlier period of his practice, he was especially felicitous in the display of his abilities, commanding a wide patronage among the best people, and his counsel was also sought by professional associates, especially in obscure forms of pulmonary and cardiac affections. Later, the study and teaching of mental disorders and nervous ailments, together with the professional oversight of institutions devoted to the care of those classes of patients occupied his earnest attention, these labors and duties finding expression in part in the production of scientific monographs for special medical bodies and the preparation and publication of textbooks and treatises covering the lines of his chosen specialty.

St. Vincent's institution for the insane, long enjoyed the benefits of his attendance, and his withdrawal from practice some years ago, was felt as a distinct loss to the profession he had so long adorned.

The membership of Dr. Bauduy in the St. Louis Medical Society, dated from an early

period of his professional career and he was chosen president of the body for the year 1890. His readiness in repartee, originality of utterance, versatility of language and expression, liveliness of imagination and in general, the sanguine and spontaneous spirit which he displayed when at his best in debate and discussion made him a favorite speaker, and always commanded a large and appreciative audience on occasions when it was known that he would appear for such purposes.

It was plainly evident to those who happened to be in a position to know, that a very large share of the personal and professional success achieved by our late fellow-member was due to the care and influence of his consort, who survives him — and this was loyally acknowledged by him — and to her, and to the remaining descendants and relatives as well, the sincere condolences of this society should be sympathetically extended.—*Bulletin*, St. Louis Medical Society.

MARTIN HAYWARD POST

Dr. Martin Hayward Post, gentleman, scholar and physician, died suddenly of angina pectoris at his summer home in Castle Park, Michigan, September 1, 1914.

As the youngest son of the eminent divine, Dr. Truman Marcellus Post, the founder and for nearly two score years the pastor of the First Congregational Church of St. Louis, his early training naturally developed the highest type of American citizenship. His preliminary education was obtained in the St. Louis public schools, in Smith Academy, and in Washington University where he received the degree of A.B. in 1872 as honor man in his class.

He taught for a time in the public schools, but later resigned his position as principal of the Blow School to take up the study of medicine in the St. Louis Medical College. He was graduated in 1877. After an internship in the City and Female Hospitals and work in general surgery under Dr. John T. Hodgen, he became the associate of the late Dr. John Green. Several years later, by his studies in European clinics, principally at Utrecht under Donders and Snellen and in London under Nettleship, he established a precedent for the younger physicians who, in later years, came into his office for training in ophthalmology. His relation to his assistants was one of cordial goodfellowship which was not broken by their establishment in independent practice.

Dr. Post was a member of the St. Louis Medical Society, the Missouri State Medical Association and a fellow in the American Medical Association. He was a fellow in the American

College of Surgeons and member of the American Academy of Medicine, the St. Louis Academy of Science, the American Ophthalmological Society, Medical Society of City Hospital Alumni, etc. He was Chairman of the Ophthalmic Section of the St. Louis Medical Society shortly after its organization, and President of the American Ophthalmological Society at the time of his death. Only recently he was elected an honorary member of the Phi Beta Kappa.

Dr. Post was connected throughout his professional career with many of the best hospitals and other institutions as consultant and ophthalmic surgeon. Even his friends could hardly realize how wide a range of activity made constant demands on his time. In every department Dr. Post showed himself to be a manly man with sturdy common sense and trustful optimism. It is difficult for those who knew him to speak of his special work, the man towered above his tasks. However, none had a clearer insight into the general problems of his specialty, nor could anyone apply the logical conclusion of a keen scientific mind in a more practical manner than he. Dr. Post could meet emergencies with original methods and be successful.

Most of his contributions to medical literature were clinical reports of unusual and interesting cases chosen from his large ophthalmic experience.

Dr. Post's urgent insistence led to the passage of a law by the State Legislature, requiring midwives to report cases of ophthalmia neonatorum more than a decade before the agitation for such laws became general. Even in the last year he worked earnestly as the honorary chairman of the committee on prevention of blindness, Missouri Association for the Blind, to frame a practical ordinance for St. Louis to compel the reporting of dangerous contagious diseases of the eye.

For many years up to the time of his death he was a most influential member of the board of managers of the Missouri School for the Blind, being appointed and reappointed by democratic governors though himself an outspoken republican in politics.

Brave and fearless in shouldering his own burdens, his interest in human welfare was world wide. He was a normal man and as such was thoroughly happy in his home, in his club, in God's out of doors, in his church and in his profession. A citizen of the world, he was fit to stand before kings.

Dr. Post filled the office of recording secretary in this society during the years 1880 and 1881, while his membership in duration covered nearly the entire span of his professional life.—*Bulletin*, St. Louis Medical Society.

NEWS NOTES

DR. NEWTON E. SMITH of Fayette was operated for appendicitis at the Missouri Baptist Sanitarium, St. Louis. He is making a good recovery.

THE Surgical Association of the Rock Island Railroad System met in Des Moines, Iowa, December 2. Dr. Norvelle Wallace Sharpe, of St. Louis read a paper on "Vascular Anastomosis and Nerve Splicing."

DR. M. A. BLISS of St. Louis attended the meeting of the Montgomery County Medical Society, October 13, and delivered an informal lecture on neurological examinations with demonstrations on the living subject.

THE new Union Station at Kansas City was opened for traffic November 1. One of the unique features is an emergency hospital equipped at a cost of \$1,000, where injured and sick travelers will be cared for.

DR. FRANCIS REDER of St. Louis was one of the guests invited to deliver addresses at the meeting of the B. Merrill Ricketts Experimental Surgical Research Laboratory at Cincinnati, November 7. Dr. Reder spoke on "Intestinal Anastomosis."

DR. GEORGE H. HOXIE of Kansas City delivered a lecture at Warrensburg on the evening of November 27. The lecture was on preventive medicine and was given in the auditorium of the normal school before a large and interested audience.

DR. DAVID SCHMALLHORST of St. Louis sustained very painful injuries on October 14, when he drove his automobile directly in front of a rapidly moving street car in order to avoid running down a little boy who suddenly ran into the path of his machine. Dr. A. P. Robertson, who was riding with Dr. Schmallhorst, was slightly injured.

THE physicians of Hermann and members of the Gasconade-Maries-Osage County Medical Society conducted a public health meeting at Hermann, October 29. Addresses were delivered by Drs. O. H. Brown and Carroll Smith of St. Louis, Dr. W. S. Allee of Olean, Dr. J. A. B. Adcock, Secretary of the State Board of Health, Jefferson City.

DR. F. J. STIERBERGER of Union was the victim of a peculiar accident recently and nar-

rowly escaped a fatal termination. He was under treatment by a dentist during which the burr slipped from the drill and dropped into Dr. Stierberger's trachea, lodging deep in the bronchial tube. It was removed and at last reports the doctor seemed entirely recovered.

DR. WILLIAM B. HIGHT of Queen City was seriously injured on October 19, when the automobile in which he was making calls, struck a mud hole and turned over. Dr. Hight was thrown against some rocks on the roadway and rendered unconscious for several hours. It was thought at first that he had sustained fatal injuries, but at last reports he was making a satisfactory progress toward recovery.

BETTER DAYS.—Under the editorial flag and, therefore, as its leading editorial, the Chicago *Herald* prints this paragraph:

AN APOLOGY

The "Herald" desires to apologize to those of its readers who saw in one of its Sunday editions a page advertisement of an alleged catarrh cure. The advertisement found its way into the paper without the knowledge of the editor. As soon as he saw it he killed it. The "Herald" does not want the dirty dollars that come from this kind of advertising.

This is the new spirit in American journalism.—*Collier's*.

THE medical history of St. Louis and of the State was the subject of a loan exhibition at the rooms of the Missouri Historical Society in the Jefferson Memorial Building, Forest Park, St. Louis, December 2-16. The Missouri Historical Society and the St. Louis Medical History Club were associated in conducting the exhibition. It included books, portraits, pictures and such other articles as hold interest for the physician and the educated layman, showing the development of medicine in Missouri. A reception to physicians, their families and friends was held at the building on the evening of December 2.

WITH this issue Messrs. Schering & Glatz resume their advertising in THE JOURNAL. The service was suspended several months ago on account of the uncertainty of importations of drugs from Europe. This firm has numerous articles approved by the Council on Pharmacy and Chemistry and by their consistent methods of honorable dealings with the profession they have earned the confidence and respect of physicians. In a recent announcement sent to physicians the firm warns doctors against druggists who charge more than the usual prices for

atophan, urotropin, medinal and other S. & G. products "because of the war," saying there is not the slightest reason or justification for it.

ON Monday, Tuesday and Wednesday, December 28, 29 and 30, at St. Louis, there will be a convocation of five scientific bodies comprising research workers and investigators in various fields of medicine and allied sciences. The societies represented are, The American Physiological Society, The American Society of Biological Chemists, The American Society for Pharmacology and Experimental Therapeutics, The American Society for Experimental Pathology and The American Association of Anatomists.

The meeting will be held at the Washington University Medical School. Members of the Missouri State Medical Association are invited to attend the sessions.

DR. VICTOR C. VAUGHAN, of Ann Arbor, President of the American Medical Association, Dr. George H. Simmons, Editor and General Manager of the American Medical Association, Dr. A. R. Craig, Secretary of the American Medical Association, and Dr. H. C. Shuttee, President of the Missouri State Medical Association, were guests of the St. Louis Medical Society at its regular meeting on December 12. Dr. Vaughan addressed the Society in his usual charming manner, choosing for his subject "Professional Ideals." The other visitors made short talks. The auditorium of the Society was filled to overflowing and the occasion was seized by many members to attend the meeting and listen to the words of these leaders who have been honored by the profession. After the meeting an informal reception was tendered the visitors in the parlors of the Society's building.

THE Audrain County "Round-Up," November 2-7, was a notable event in many respects, but especially so in its educational value. The Better Baby Conference was one of the most interesting and instructive features of the week. Eighty-five babies were scored and lectures were delivered to the parents and young people. Mrs. C. W. Greene of Columbia had charge of this phase of the meeting and the members of the Audrain County Medical Society examined the babies, using the A. M. A. score cards. Short addresses were made by Drs. J. F. Harrison, J. G. Moore, R. C. Strode of Mexico, Dr. C. W. Greene, Professor of Physiology, Missouri University; Mrs. C. W. Greene, of the Missouri Congress of Mothers and Dr. E. J. Goodwin, Secretary, Missouri State Medical

Association. In the evening of November 3, Dr. F. J. Lutz of St. Louis delivered a popular lecture on the cancer problem.

A SUCCESSFUL and enthusiastic Baby Health Conference was held at Boonville in connection with the Cooper County Round-Up, November 6-7. This conference was held according to the A. M. A. score card under the direction of Mrs. C. W. Greene of Columbia, State Chairman of the Child Welfare Department of the Home Makers' Conference, and the Cooper Medical Society, Dr. C. S. Roberts, Secretary. Ninety splendid babies were entered and examined in the two half-days, Mrs. Greene making the anthropometric measurements, and Drs. Roberts, Russell, Evans, Van Ravenswaay, Williams, Abney, Quigg, Weitz, Smiley and Parrish making the medical examinations. The conference gave splendid evidence of the far-sightedness of the A. M. A. in organizing the work of the Committee on Health and Public Instruction. As in the conference held in Mexico on November 3, the conference at Boonville revealed unsuspected child defects, the most noteworthy of which was the discovery of several cases of navel rupture, and one of undeveloped penis. The conference was a source of interest and instruction both to the doctors and citizens. During the general program on Friday, Mrs. Greene lectured on "Factors in the Preservation of the Health of the Baby."

MEMBERSHIP CHANGES, NOVEMBER

NEW MEMBERS

Henry D. Grady, Miami.
John W. Hawkins, Glasgow.
J. A. McGraw, Gilman City.

CHANGE OF ADDRESSES

O. F. Clagett, Jamesport to Carbondale, Colo.
H. W. Gibbs, Roswell, N. Mex., to Dawson, N. Mex.
G. E. Hertel, St. Louis to Holloway, Minn.
James M. Lawrence, Excelsior Springs to Albany, Mo.
J. H. Martin, Edgehill to Pilot Knob.
P. L. Pomeroy, Warsaw to Hunter.
F. H. Rosebrough, St. Louis to Brownwood, Texas.
Clarence V. Smith, St. Louis to Danville, Ill.
Anthony L. Stadtherr, St. Louis to Reno, Nev.
Waldemar Ude, Hermann to St. Louis.

DECEASED

O. B. Campbell, St. Joseph.
Erastus L. Evans, Manes.

THE Saint Louis Society for the Relief and Prevention of Tuberculosis has just started its 1914 Red Cross Seal Campaign. These little Christmas stickers are the chief revenue of the society. They sell for 1 cent each and last year netted the society nearly \$10,000. They are on sale in the St. Louis Medical Society's headquarters, 3525 Pine Street.

The St. Louis Anti-Tuberculosis Society works exclusively in St. Louis and St. Louis County. Its scope of work includes taking care of over 900 patients in their homes on account of inadequate hospital facilities; operating an open air school at 5643 Natural Bridge Road and a Night and Day Camp at 9500 South Broadway.



The Board of Education recently built a school accommodating one hundred and fifty children, located at Grand and Park avenues. The Tuberculosis Society will do the nursing and the feeding of the children and the out-patient work.

Dr. M. J. White of the United States Public Health Service is medical director of the society.

The seals are sold by all antituberculosis societies in the state.

DURING November the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion with New and Nonofficial Remedies:

Antiseptic Supply Co.: Cupric Applicators; Cupric Applicators, Special; Caustic Applicators, Special; Stypstick Applicators, Special (accepted for the appendix to N. N. R.).

Laboratory of W. T. McDougall: Pasteur Antirabic Vaccine.

H. K. Mulford Co.: Solution Pituitary Extract.

Radium Company of America: Radium Bromide, Radium Chloride, Radium Sulphate.

Standard Chemical Company: Radium Carbonate.

Clinical Evidence:—In view of the unsatisfactory evidence for the therapeutic value of articles proposed for inclusion with New and Nonofficial Remedies, the Council adopted the following statement:

“Claims are often made, however, which are incompatible with common experience and sometimes defy the laws of Nature. Claims which seem highly improbable will not be admitted by the Council unless the manufacturer supports them by evidence acceptable to the Council. In doubtful cases the Council acts on these questions under the advice, and with the cooperation, of its staff of clinical consultants.”

Change of Formula.—In view of information received from the Antiseptic Supply Company the Council has modified the description of Cupricstricks to indicate that these are tipped with a mixture of copper sulphate, alum and potassium nitrate, containing 20-25 per cent. of copper sulphate.

Pituitary Liquid.—Armour and Company have informed the Council that its Pituitary Liquid is adjusted to uniform strength by the method of G. B. Roth (*Jour. of Pharm. and Exper. Thera.*, July, 1914). The description of Pituitary Liquid, Armour has been revised to indicate this.

STATE BOARD OF HEALTH NEWS

The Board held examination for license to practice, at St. Louis, December 14, 15 and 16.

Beginning with the 1916 session the National University of Arts and Sciences at St. Louis will inaugurate a five-year course for medical students.

The State Board has begun the free distribution of prophylactic typhoid vaccine. The University of Missouri will manufacture the vaccine under the supervision of Dr. M. P. Ravenel, Professor of Preventive Medicine and Bacteriology. The Board of Health will send a supply free to any reputable physician making request.

Last April the Board of Health made arrangements to administer antirabic treatment free to any citizen bitten by animals. The treat-

ment is given at the headquarters of the Board at Jefferson City under the direction of Dr. George H. Jones, State Bacteriologist, the serum being supplied by the U. S. Public Health Service. A total of twelve persons have been treated, five of whom are still under observation.

The standard of medical education in Missouri has been substantially advanced through an agreement recently concluded between the State Board of Health and the National University of Arts and Sciences, the St. Louis College of Physicians and Surgeons and the Kansas City Hahnemann Medical College. By the terms of this agreement these colleges, which are all in Class C and have hitherto accepted certificates from county school superintendents as equivalent to a high school diploma, will in future require matriculants to possess a diploma from an accredited high school.

CORRESPONDENCE

PUBLIC HEALTH EDUCATION

KANSAS CITY, MO., Dec. 2, 1914.

To the Editor:—Permit me to make a suggestion through your columns to the county societies that are seeking to follow out a program of public education. The object of this campaign is, to put it briefly, to show that public health and welfare depend on a scientifically trained medical profession, and to make the public acquainted in a general way with the results of scientific investigation along medical lines.

It is very difficult to obtain good results from a haphazard address every two or three years, or even every year. The best work of the profession can be explained only to those laymen who have the preliminary information to appreciate it. Furthermore, the subject matter is too vast to be even touched on in any one lecture.

On the other hand, if lecture courses along university extension lines could be given and a group of people could be made fairly well informed on health topics, even if such a group consists of but 50 to 100 people, more good would accrue to a community in one winter than from one lecture to 300 to 600 people, supposing that a course consists of six lectures.

Such a scheme would enable the lecturer to use blackboard, charts and stereopticon, and thus really elucidate the many difficult points in physiology and pathology which our people ought to have clearly in mind.

Very truly yours,

G. H. HOXIE, M.D.

MISCELLANY

MISSISSIPPI VALLEY CONFERENCE ON TUBERCULOSIS

The second Mississippi Valley Conference on Tuberculosis, held under the auspices of the National Association for the Study and Prevention of Tuberculosis, was held in St. Louis on October 6, 7 and 8, 1914, and proved to be quite a notable gathering. This conference invites delegates from all states whose water courses drain into the Mississippi River, which means the greater part of the states east of the Rocky Mountains. Sixteen of these states were represented by eighty-five delegates from outside of St. Louis. Twenty of these were from the State of Missouri outside of St. Louis, making a pretty good showing for the tuberculosis workers of the state. The total number registered was 153.

The Committee of Arrangements consisted of James Minnick of Chicago, chairman; A. W. Jones, Jr., of St. Louis, secretary; Mrs. J. F. Hendriksen of Grand Rapids; Aretas E. Kepford of Des Moines, and W. B. Thurber of Indianapolis. Too much credit cannot be given to Mr. A. W. Jones, Jr., the secretary, for the success of this very representative conference gathered from so many states.

The first coming together was at the Planters Hotel, at 4 p. m., on October 6, when a thoughtful and appropriate address of welcome was given by Mayor Henry W. Kiel, and responded to by Rev. J. W. Day of St. Louis.

On Wednesday morning the meeting was presided over by Mr. James Minnick of Chicago. After reports of committees, George T. Palmer, M. D., of Springfield, Ill., opened a discussion on "The need of closer cooperation of tuberculosis sanatoria, hospitals, local and state anti-tuberculosis societies and boards of health with each other and with the National Anti-Tuberculosis Association." Among other things Dr. Palmer advocated the adoption, by representative bodies, such, perhaps, as this conference, of some sort of a creed or declaration of belief as to what tuberculosis is, how it is spread, how to be prevented, and how to be treated. He declared that in spite of the general diffusion of knowledge along this line, which has so greatly increased during the past few years and which might, at first sight, seem to be sufficient, it is surprising how much nonsense is talked on the subject by people who ought to know better, even including many doctors, how much skepticism exists concerning well-established truths and how much bad advice is given to the victims of this disease and to their friends.

After some bantering protest against giving the name of creed to any declaration which this body might put forth, and the assertion that the day of creeds is past, the matter was taken up more seriously. Dr. Philip P. Jacobs of New York, assistant secretary of the National Association for the Prevention of Tuberculosis, agreeing heartily with the position taken by Dr. Palmer, announced that the National Association has been slowly and carefully gathering the material for such a creed, or declaration, and that a pamphlet setting this forth would soon be issued.

Among those taking part in the discussion following Dr. Palmer's paper, which covered a wide field, were Mr. Kepford of Iowa, Dr. Gepler of Indiana, Dr. John Stewart of Arkansas, Mr. R. J. Newton of Texas, Prof. Sherman C. Kingsley of Chicago, Dr. Bishop of Cleveland, Dr. French of Kentucky, Dr. Charles Sachs of Chicago, Dr. W. McN. Miller of Missouri, Mrs. Walker of Michigan and Dr. Kuhn of Tennessee.

In the afternoon the conference was divided into three sections, as follows:

(a) *Anti-Tuberculosis Organization.*—Chairman: Dr. P. P. Jacobs of New York. The questions of how to form organizations; of what their scope should be; of how they should be financed; of why they so often languish and die and how to prevent such disaster, were all duly canvassed and much light was thrown on them.

(b) *Institutional Care of Tuberculosis Patients.*—Chairman: Dr. M. J. White, United States Public Health Representative, of St. Louis. Here were considered the need for state, city, county or district sanatoria, the hospital care of advanced consumptives, and the general question of institutional versus home care of the tuberculous. If any one entered this section with any doubt in his mind as to the paramount importance of institutional care and treatment, he must have left the session thoroughly convinced to the contrary.

(c) *Nursing Care of Tuberculosis Patients.*—Chairman: Miss Nancy L. Dorsey, R.N., of St. Joseph, Mo. The question of how to organize rural nursing, of the value of the nurse in the public schools, in clinics, for social service, and in "follow-up" work, were discussed and elucidated in the most practical manner.

EVENING SESSION

General Meeting.—Chairman: Dr. Charles Sachs, President Chicago Tuberculosis Institute; subject: The Tuberculosis Child and the Community.

1. An intensive study of tuberculosis in the individual child, by Dr. S. T. Lipsitz of St. Louis.

2. Open-Air Schools. By Sherman C. Kingsley of Chicago, Director of the Elizabeth McCormick Memorial Fund.

It may be mentioned here that after the section meetings in the afternoon such members of the conference as expressed their desire to that effect were conducted, in automobiles kindly donated for that purpose by St. Louis members, to the tuberculosis hospitals, the out-door school that is, and the larger out-door school that is to be and other points of interest in the city.

THURSDAY, OCTOBER 8

General Meeting.—Chairman: A. W. Jones, Jr., St. Louis.

This session was largely devoted to the best methods of conducting the Red Cross Seal campaign, by means of which so many local societies secure a considerable part of the funds required for the carrying on of their work; and to the best means of disseminating tuberculosis literature, both in the city and in the country. This resolved itself into a good deal of an "experience meeting" and proved a valuable school to many who were not satisfied with the success of their previous efforts along these lines.

Taken as a whole, this second Mississippi Valley Conference on Tuberculosis was a valuable means of education and of inspiration to those who attended its meetings. It is just the sort of gathering of which we need more in this part of the country to increase our knowledge and to unify and extend our efforts in this great field of philanthropic work, and of the building of a healthy manhood for the future of our land.

The following were elected members of the council for the ensuing year: A. W. Jones, Jr., St. Louis, chairman; Dr. B. H. Bishop, Cleveland, Ohio; Mrs. R. K. D. Edholm, Omaha, Neb.; Miss Chloe Jackson, Frankfort, Ky.; W. D. Thurber, Indianapolis, Ind.; James Minnick, Chicago, ex officio.

Indianapolis will be the next place of meeting.

A STATEMENT CONCERNING THE FEEBLE-MINDED IN MISSOURI PRESENTED TO GOVERNOR ELLIOTT W. MAJOR

237 MUNICIPAL COURTS BUILDING,
St. Louis, Mo., Nov. 4, 1914.

Hon. Elliott W. Major, Governor, Jefferson City, Mo.:

At the request of a number of people interested, I have prepared the attached statement telling briefly the condition of the feeble-minded in the state of Missouri, in the hope that two results may be obtained, to-wit:

1. That the present deplorable situation and necessity for action may be brought home to you as governor of the people with such force that you will include the immediate completion of the Missouri colony for the feeble-minded at Marshall as a part of your program for the next legislature.

2. That you will exert your best efforts to have the legislature carry out your recommendation to complete the institution, being assured by this statement that there are many others deeply interested in the problem, who will be glad to assist you in your efforts.

Respectfully,

A. FAIRBANK.

The statement follows:

St. Louis, Nov. 4, 1914.

Hon. Elliott W. Major, Governor, Jefferson City, Mo.:

At the request of the Board of Children's Guardians, I visited the Missouri colony for the feeble-minded and epileptic in April, 1914. I was instructed to ascertain why the city of St. Louis had been unable for several years to get additional patients in that institution.

I found the institution greatly handicapped on account of small appropriations and because of its greatly over-crowded condition. The plans for the institution call for a completed scheme of buildings capable of accommodating one thousand patients. It is only half completed and every inch of that half is made use of. There are some eight hundred applications for admission on file, some of them being several years old. I was deeply stirred by what I saw and came away feeling that the good citizens of Missouri should be acquainted with this depressing situation. Accordingly, committees were appointed to make a survey in Kansas City and St. Louis to determine as near as possible the number of feeble-minded in these two cities. This survey has already brought to light about 330 proper institution cases in Kansas City and about 410 in St. Louis. These 740 cases are not on record at Marshall.

Government statistics estimate that about one out of every 500 is feeble-minded. None of the states is making provision for the feeble-minded on this basis, but a glance at the following table of government statistics will show that states in our vicinity are doing better than the state of Missouri.

FEEBLE-MINDEDNESS IN STATE INSTITUTIONS (1912)

	Population	No. Cared for	Ratio to Population One in
Missouri	3,293,335	450	7,318
Iowa	2,224,771	1,496	1,487
Minnesota	2,075,708	1,531	1,356
Indiana	2,700,876	1,225	2,206
Illinois	5,638,591	2,000	2,819

It will be seen that Missouri is not making proper provision for these sub-normal citizens. It naturally follows that aggravated cases of feeble-mindedness, which must be placed somewhere at once, are being

taken care of at improper institutions. The report of the State Board of Charities for the last biennial period shows 757 feeble-minded inmates in Missouri almshouses! Truly, it is pitiful to be so poor as to have to be sent to the county poor farm, but surely words fail when we attempt to describe how deplorable it must be to be sent to the county poor farm there to associate with feeble-minded people who should be at Marshall.

The city of St. Louis, when compelled to make provision for a feeble-minded boy or girl because of Marshall's crowded condition, must send that child to the insane asylum, and St. Louis now has twenty in that institution who should be at Marshall.

The actual condition is not apparent to the casual observer, because many of the counties, on being informed of the long waiting list of applicants, have stopped sending any new applications. Also, there is no agency, public or private, either charged with the responsibility or assuming the responsibility of gathering statistics of the number of feeble-minded in the state. The school census requires the enumeration of deaf and dumb and blind children, but makes no provision for feeble-minded or epileptic.

Using conditions in other states as a basis for the figures, a very conservative estimate places the number of feeble-minded in the state of Missouri at from 7,000 to 10,000, of which number about 4,000 need institutional care.

Judges who preside over criminal courts and juvenile courts have some idea of this situation, as the defective and mentally deficient are largely concerned in crime, immorality and alcoholism. They, with the physicians and other private citizens who are directly interested by reason of a study of this situation, realize the need. The state as a whole has not yet awakened to the situation.

The care of these mental defectives does not represent an entire cost on the community, because many of them are able-bodied and are available for work about the institution and on the farm. Experts long engaged in the care of this class of defectives state that nearly one-half are self-supporting.

It will thus be seen that the future care of the feeble-minded not only commands your attention, but practically demands it. The foregoing is a very brief statement of conditions. It is sufficient, however, to show the need.

[Excerpts from many letters of citizens were attached to the statement urging the necessity of completing the institution at Marshall at the earliest possible date.—Ed.]

**58,816 MANUFACTURERS TO BE NOTIFIED
THAT GUARANTIES AND SERIAL
NUMBERS ARE AT AN END
MAY 1, 1915**

The Department of Agriculture is sending individual official notices to over 58,000 manufacturers that on May 1, 1915, their guaranties filed under the food and drugs regulations will be stricken from the files and that thereafter the serial numbers assigned to such guaranties must not be used on the label or package of any food or drug. This action is in accordance with the regulations adopted on May 5, 1914, by the secretaries of the Treasury, Agriculture and Commerce, which abolish the use of the guaranty legend and serial number on foods and drugs. The ground for this action was that the legend "Guaranteed by (name of guarantor) under the Food and Drugs Act, June 30, 1906," was understood by many consumers to mean that the Federal Government had

passed upon and certified the excellence of the article so labeled, whereas the legend and serial number were merely a guaranty on the part of the manufacturer to his dealer that the manufacturer would assume full legal responsibility for his goods.

In the meantime from the records it appears that 58,816 manufacturers have filed guaranties and obtained serial numbers, the last number issued being 58,816.

The notice advises manufacturers that after May 1, 1915, guaranties should not appear on the label or package, but should be incorporated in or attached to the bill of sale, invoice, bill of lading, or other schedule giving the names and quantities of the articles. The guaranty may be printed or stamped on the invoice, and if it is signed in accordance with the new regulations and refers specifically to the goods listed in the invoice or document it covers, it need not contain a detailed description or schedule of the articles.

Manufacturers who are asking permission to file guaranties and obtain serial numbers are being advised that they should attach their guaranty to their invoices and not seek to use the legend or serial number on their labels, as the guaranty and serial number will be withdrawn within a year.—*U. S. Dept. of Agriculture.*

SOCIETY PROCEEDINGS

FOURTEENTH DISTRICT MEDICAL ASSOCIATION

The Fourteenth District Medical Association met in Marshall, October 29, at the Elks' club.

The morning session was held at 10:30, Dr. L. I. Sluck of Nelson, presiding in the absence of the president, Dr. R. L. Evans of Boonville. The business of the association was attended to at this session, after which the visitors were entertained at dinner at the Ruff by the Saline County Medical Society.

Covers were laid for the following: Dr. L. Carthrae, Corder; Dr. F. A. Howard, Slater; Dr. F. W. Tuttle, Mt. Leonard; Dr. L. I. Shuck, Nelson; Dr. J. R. Hall, Napton; Dr. C. H. Van Ravensway and Dr. G. J. Weitz, Boonville; Dr. G. A. Aiken, Malta Bend; Drs. T. B. Hall, A. E. Gore, Wm. Harrison, John R. Hall, B. M. Spotts, J. E. Harris, D. F. Manning and Finis L. Anderson, Marshall.

The doctors' table was beautiful in floral decoration. A basket filled with exquisite dahlias made a pretty center piece. This thoughtful attention was given the members of the medical association by Miss Mabel Fisher, who is the daughter of the late Dr. W. J. Fisher, for many years a practitioner in Saline, and Mrs. D. F. Manning.

At the afternoon session two papers were read; one by Dr. A. E. Gore of Marshall, and the other by Dr. J. Q. Cope of Lexington. Dr. Gore's subject was "Gall Stones."

Dr. J. R. Hall of Marshall, presented a case of pemphigus.

LINTON DISTRICT MEDICAL ASSOCIATION

The semiannual meeting of the Linton District Medical Association was held at Mexico, November 19, Dr. C. B. Clapp, Moberly, president. The program consisted of the following: "Exophthalmic Goiter," by Dr. Rowland Hill of St. Louis; "Affections of the Nasal Sinuses," by Dr. C. K. Dutton of Moberly; "Vesical Symptoms in Spinal Cord Lesions," by Dr. H. Unterberg of St. Louis; "Personal Observations on the Wassermann Reaction," by Dr. George

Ives of St. Louis; "Heart Lesions Found in the Physical Examination of 800 Students Entering the University of Missouri, September and October, 1914," by Dr. Woodson Moss of Columbia; "Surgical Diseases as Etiological Factors in Gastric Symptoms," by Dr. Carroll Smith of St. Louis.

About twenty-five physicians were present and took part in the discussion of these papers. The Mexico physicians entertained the visitors with a banquet at the Ringo hotel.

SOUTHWEST MISSOURI MEDICAL SOCIETY

The fall meeting of this society was held at Springfield on November 5 and 6 with the president, Dr. R. M. Rogers of Mansfield, in the chair.

In a very able address entitled "The Silent Hero," Dr. Rogers lauded the achievements of the profession, the great discoveries of the individual workers in the medical field and the self-sacrificing spirit and the beneficent labors of the "silent hero." While the armed destroyer of human life is revered and his deeds praised in song and story and writ large in the pages of history, the Silent Hero—the physician—whose mission is the saving, not the destruction, of life, is in reality more worthy of the plaudits of the people.

The meeting was well attended and the interest in the proceedings very pronounced. About twenty papers were read.

ST. LOUIS MEDICAL SOCIETY

After a vacation of nearly three months, the St. Louis Medical Society convened Sept. 19, 1914.

The meeting was called to order by the president, Dr. A. F. Koetter.

The guest of the evening, Prof. Charles E. Witter, spoke on "Personal Experience in the Belligerent Countries at the Outbreak of the European War." A rising vote of thanks was extended Professor Witter for his interesting paper.

Meeting of Sept. 26, 1914

The meeting was called to order by the president, Dr. A. F. Koetter.

The guest of the evening was Mr. Edward E. Wall, water commissioner of the city, who read a paper entitled "The Water Supply of St. Louis." His paper was illustrated with lantern slides. A rising vote of thanks was extended Mr. Wall.

Meeting of Oct. 3, 1914

The meeting was called to order by the president, Dr. A. F. Koetter.

The scientific program consisted of the following:

Dr. George Gellhorn read a paper entitled, "Report of Three Cases of Extra-Peritoneal Cesarean Section," illustrated with lantern slides and with demonstration of two patients and their babies.

Discussion by Drs. Roland Hill, F. J. Taussig, Hugo Ehrenfest and G. D. Royston; Dr. Gellhorn closing.

Dr. Klenk read a paper entitled "A Preliminary Report of the Effect upon Animals of the Intravenous Injection of the Coccobacillus Foetidus Ozaenae."

Dr. Louis K. Guggenheim read a paper entitled, "The Treatment of Ozaena with Coccobacillus Foetidus Ozaenae Perez Vaccine."

Discussion by Dr. E. Lee Myers; Drs. Guggenheim and Klenk closing.

Meeting of Oct. 10, 1914

The meeting was called to order by the president, Dr. A. F. Koetter.

The scientific program consisted of the following:

Dr. Rollin H. Barnes read a paper entitled, "A Case of Fistula-in-ano; Result of Operation without Cutting Sphincter," with exhibition of patient.

Dr. William C. Stewart read a paper on "Justice Rendered Our Profession Through Legitimate Reform of the Attitude of the Laymen, Druggists, Clinical Fanatic and Existing Medical Ethics."

Dr. Cleveland H. Shutt read a paper entitled, "Abuses to Which the City Dispensaries Are Imposed as Institutions of Public Charity."

The following discussed Dr. Stewart's and Dr. Shutt's papers: Drs. Robert E. Schlueter, Jacob Hartmann, Paul C. Scholz, Montague M. Meyer, Edmond Bonnot, Wm. T. Coughlin, Louis C. Boisliniere and Walter H. Fuchs; Drs. Stewart and Shutt closing.

Meeting of the Council, Oct. 14, 1914

The meeting was called to order by the president, Dr. A. F. Koetter.

The following applicants were unanimously elected:

Drs. Joel W. Hardesty, City Hospital; Eugene M. Lucke, National Bridge and Newstead avenue; David R. Lamb, 3640 Arsenal street; William D. Petit, 1600 South California avenue; Max Pollack, 1127 North Seventh street; LeRoy Sante, 3545 McKean avenue; Anthony L. Stadtherr, Metropolitan building; Edward F. Stadtherr, Grand and Gravois avenues; Herbert I. Taylor, 1454 N. Taylor avenue; John R. Vaughan, 560 Skinker road; Clarence V. Smith, City Hospital.

The application of Dr. H. Lee Farris, by transfer from Memphis, Shelby County (Tenn.) Medical Society, was read for the first time.

The Library Committee reported the following additions to the library during the past four months:

General Works, 30; Transactions, Reports and Bound Journals, 159; Works on Anatomy, 8; Physiology, 3; Chemistry, 4; Materia Medica, 3; Therapeutics, 3; Bacteriology, 3; Practice of Medicine, 19; Surgery, 9; Gynecology, 1; Obstetrics, 4; Neurology, 5; Pediatrics, 4; Laryngology and Rhinology, 2; Ophthalmology, 1; Dermatology, 1; Genito-Urinary, 1; Venereal Diseases, 1; Veterinary Medicine, 1, and Hygiene, 1.

Total of books and journals consulted, 594; books and journals loaned, 69; visitors to the library, 395.

The compilation of the reprints of the St. Louis physicians is still being continued and the committee expects to publish the list as soon as completed.

The secretary read the resignation of Dr. F. C. Brooks, which on motion was accepted.

The secretary read the following letter:

Dr. F. J. Lutz, Chairman, Library Committee: At a recent meeting of the St. Louis Pediatric Society, it was discovered that we had a surplus in the treasury. In order to correct this unusual state of affairs it was decided to contribute \$20 to the library fund of the St. Louis Medical Society (formerly the St. Louis Medical Library Association), to be devoted preferably to the purchase of pediatric literature. Enclosed find check for \$20.

T. C. HEMPELMANN, Sec.-Treas.,
St. Louis Pediatric Society.

On motion the librarian was instructed to thank the donors and carry out as far as possible their wishes.

Meeting of Oct. 17, 1914

The meeting was called to order by the president, Dr. A. F. Koetter.

The scientific program was furnished by the St. Louis Pediatric Society and consisted of a symposium on Diseases of the Newly-Born as follows:

Dr. George M. Tuttle read a paper entitled "Asphyxia."

Discussion by Drs. John Zahorsky, Jules M. Brady and Ella Marks; Dr. Tuttle closing.

Dr. Jules M. Brady read a paper entitled, "Hemorrhagic Diseases of the Newly-Born."

Discussion by Drs. George M. Tuttle, Vilray P. Blair and John Zahorsky; Dr. Brady closing.

Dr. P. G. Hurford read a paper entitled, "Inanition Fever."

Discussion by Drs. John Zahorsky and Jules M. Brady.

Dr. John Zahorsky read a paper entitled, "Diseases Associated with Jaundice in the Newly-Born."

Discussion by Drs. Adrien S. Bleyer, Samuel E. Peden, Jules M. Brady and Ella Marks; Dr. Zahorsky closing.

Meeting of Oct. 26, 1914

This session was one of unusual interest it being arranged for the purpose of encouraging more intimate cooperation between the representative medical society of the city and the city officials in the administration of the health agencies of St. Louis. The subject under consideration was the Board of Public Service: its mission and relation to the public health and safety of St. Louis. Addresses were made by the mayor, the Hon. Henry W. Kiel; Mr. Edmond R. Kinsey, president of the board; Mr. Charles M. Talbert, director of the department of streets and sewers; Mr. James A. Hooke, Director Department of Public Utilities; Mr. Charles E. Swingley, director department of Public Safety, and Mr. Emil N. Tolkaz, director department of public welfare.

A report of the remarks made by the guests will be published in our next issue.

ATCHISON COUNTY MEDICAL SOCIETY

The Atchison County Medical Society met in Rockport on Friday, October 23. Officers present: Dr. Charles E. Benham, president; Dr. O. M. C. Chamberlain, vice-president; Dr. Austin McMichael, secretary and treasurer. Members: Dr. C. M. Waugh, Tarkio; Dr. J. A. Postlewait, Tarkio, and Dr. E. A. Lewis, Rockport.

After the usual routine of business and the election of Dr. Goltry of Westboro, to become a member of the society, the society proceeded to the election of officers for the ensuing year which resulted as follows: E. P. Taylor, president; James A. Hunter, vice-president; Austin McMichael, secretary and treasurer; Charles E. Benham, delegate to state society meeting.

A paper on the subject of Rheumatism was read and partially discussed. The paper no doubt would have been thoroughly dissected had it not been for the threatening condition of the weather which claimed the attention of those who came in automobiles. A hurried consultation resulted in a unanimous diagnosis that a shower was near and that they could not afford to be caught away from home in a Ford with a muddy and slick road ahead of them. For this reason the writer of the paper obtained a reprieve until the next session, as the society adjourned sooner than it would otherwise have done. The place selected for the next meeting was Fairfax on Thursday, Jan. 14, 1915.

This society has been in existence for thirteen years. Has held some very interesting meetings, which have been a source of instruction to those present, not especially from new ideas but from renewing old ideas and stimulating the mind to greater activity along the line of investigation and study which will enable the practitioner to apply his knowledge more effectively.

AUSTIN McMICHAEL, M.D., Secretary.

CALLAWAY COUNTY MEDICAL SOCIETY

The Callaway County Medical Society met in Fulton, Nov. 12, 1914, at 11:30 a. m. at the Palace Hotel, Dr. Blackburn, vice-president, in the chair.

There were present Drs. Charles H. Christian, Henry I. Owen, Robert N. Crews, Quin Blackburn, W. T. Lemon and Martin Yates of Fulton; Dr. M. B. Titterington, St. Louis, and Dr. J. G. Moore, Mexico.

After reading the minutes of the last meeting the society took a recess for dinner. In the afternoon the scientific program was taken up.

Dr. Titterington of St. Louis, read an interesting and very instructive paper on "Roentgen-Ray Massive Dose and Deep Therapy," which was highly appreciated by the members of the society. A general discussion of x-ray therapy followed.

Dr. J. G. Moore of Mexico, read a valuable paper on "Fibroid Tumors with Pregnancy," reporting several cases. This paper was very interesting and practical and provoked a free discussion.

A vote of thanks was tendered Drs. Titterington and Moore for their papers.

Adjourned to meet in Fulton, Dec. 10.

MARTIN YATES, M.D., Secretary.

FRANKLIN COUNTY MEDICAL SOCIETY

A regular meeting of the Franklin County Medical Society was held in the offices of Dr. H. A. Booth at Pacific, Tuesday evening, Nov. 3, 1914. The president and vice-president being absent, Dr. A. L. McNay was elected temporary chairman.

The following members were present: Drs. A. L. McNay, Charles F. Briegleb, H. A. Booth, D. E. Williams and H. A. May. Visitors present: Dr. Werner H. Wagner, Berger, Mo., and Dr. L. B. Couch, Luebbering, Mo.

The minutes of May 5, 1914, were read and approved.

The treasurer's report, showing a balance of \$50.88 in the treasury, was approved.

Dr. C. F. Briegleb read a paper on the "Use of Bacterins by the General Practitioner." This paper was highly instructive and was discussed by the members and visitors present, all of whom manifested much interest in the subject.

Dr. L. B. Couch of Luebbering, applied in due form for membership in the society.

The Board of Censors reported as follows:

"The Board of Censors report favorable on the application of Dr. Werner H. Wagner, Berger, for membership in the Franklin County Medical Society.

"(Signed) H. A. MAY,
"A. L. McNay."

Dr. Werner H. Wagner was unanimously elected a member of the society at this meeting.

Election of officers for the year 1915 resulted as follows: President, Dr. Albert L. McNay, Pacific; vice-president, Dr. Charles F. Briegleb, St. Clair; secretary and treasurer, Dr. H. A. May, Washington. Dr. James P. Dunnigan of Sullivan, was elected

delegate to the State Association for a period of two years; Dr. Walter P. Mattox of Sullivan, was elected alternate delegate. Dr. H. A. Booth of Pacific, was elected to the Board of Censors, taking the place of Dr. J. P. Dunnigan, whose term of office as censor expires this year. The Board of Censors as now constituted, with indicated time to serve, is as follows: H. A. May, one year; A. L. McNay, two years, and H. A. Booth, three years.

Washington was selected as the next place of meeting.

H. A. MAY, M.D., Secretary.

GASCONADE-MARIES-OSAGE COUNTY MEDICAL SOCIETY

On Thursday, October 29, the Gasconade-Maries-Osage County Medical Society held its annual meeting in the circuit court room at Hermann.

Because of the great democratic meeting at which Champ Clark officiated, the afternoon session did not begin until 4 p. m., Dr. John D. Seba, secretary, opening the meeting.

The following doctors were present: Drs. H. A. May, Washington; O. H. Brown, Carroll Smith and E. J. Goodwin, St. Louis; J. A. B. Adcock, Jefferson City; W. S. Allee, Olean; Frank DeVilbiss, Tipton; H. Workman and E. G. Rhodius, Potsdam; F. H. Coughill, Morrison; E. L. Haffner and H. J. Rickhoff, Hermann, and J. D. Seba, Bland; visitor, W. C. Wessell, Hermann.

Dr. O. H. Brown delivered a lecture on asthma and its complications which was generally discussed by the doctors present.

Dr. Carroll Smith read a paper on surgical lesions of the stomach as etiological factors.

Dr. E. J. Goodwin, secretary of the Missouri State Medical Association, delivered a lecture on organization. Both papers and lecture were discussed and then the society adjourned for supper.

The night session was called to order by Dr. Seba at 8 o'clock.

The Hermann orchestra rendered excellent music between each number on the program.

Dr. O. H. Brown gave an interesting talk on tuberculosis and the methods of prevention, calling particular attention to the spread of the disease by expectoration on side-walks and public places. He said that the death rate from the white plague has wonderfully decreased in late years owing to more stringent sanitary measures.

Dr. Carroll Smith gave an explicit talk on the prevalence of cancer, which was of interest to the doctors as well as the laity, stating that cancer in its early stages can be cured and for that reason care should be taken to prevent progress of the disease.

Dr. J. A. B. Adcock of Jefferson City, secretary of the State Board of Health, read a paper outlining the duties of health boards and giving a synopsis of the work performed by the state board in the matter of preventing the spread of contagious diseases.

Senator W. S. Allee of Olean, in his address urged stricter enforcement of the laws governing the practice of medicine in the interest of suffering humanity, on whose credulity irresponsible persons, quacks and so-called healers are preying.

Dr. Frank DeVilbiss followed with a few remarks on the same subject.

The meeting was the first medical meeting in Hermann and the doctors as well as laymen were highly pleased and expressed the wish to meet many more times on similar occasions.

JOHN D. SEBA, M.D., Secretary.

HOWARD COUNTY MEDICAL SOCIETY

The Howard County Medical Society met at Fayette, November 6, at 2:15 p. m., Dr. Thomas J. Payne in the chair.

Doctors present: J. W. and W. R. Hawkins, W. B. Kitchen, C. O. Lewis, C. H. Lee, V. Q. Bonham, C. P. Megee, J. T. Wood, A. W. Moore, T. J. Payne and T. D. Richards.

The minutes of the October meeting were read and approved.

Dr. T. C. Richards reported an interesting case of neuralgia in a woman aged 49 years; menstruating after a complete hysterectomy and ovaries removed; tumor was malignant. The case was discussed.

Dr. C. W. Lee is to read his paper on "Serum Therapy" at the December meeting.

The secretary read his report for 1914, which was approved.

The election of officers resulted as follows: Dr. J. W. Hawkins, Glasgow, president; Dr. J. T. Wood, Harrisburg, first vice-president; Dr. W. R. Hawkins, Glasgow, second vice-president; Dr. C. W. Watts, Fayette, secretary-treasurer; Dr. H. K. Given continued as auxiliary member on pure food and drugs.

Peace and harmony prevailed and the society adjourned at 3:45 to meet Friday, December 4.

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

KNOX COUNTY MEDICAL SOCIETY

Antituberculosis Campaign

Believing that success in anything can be obtained only by continuous, hard, earnest and uninterrupted endeavor, the Knox County Medical Society launched its second annual campaign, devoting two entire days to the task it had set before it, in which every nook and corner of the county was visited.

That "in unity there is strength" was proved over and over again by the magnificent audiences which presented themselves at all points to drink in knowledge from the lips of the speakers.

The local profession turned out to a man showing the stuff there is in them; without the aid of the state society this would have been impossible of attainment, for unanimity of opinion and uniformity of action is impossible without the cohesive power of organized effort.

Last year the society undertook this pioneer work more as an experiment than anything else, though it must be admitted that a selfish motive was at the bottom of it.

Over a period of six or seven years the society was kept in existence in a haphazard sort of way by the untiring and pertinacious efforts of only five men who refused to disband under the most discouraging circumstances. It became necessary to attempt something to rejuvenate the spirit of the members; something big, out of the ordinary, something that would draw out and abolish the lethargy then so prevalent within the ranks of the society. An organized fight against tuberculosis was decided on and the county court was petitioned to aid in this undertaking by its financial support. Although \$100 was asked for only \$50 was allowed by the court, notwithstanding this handicap it was thought best to proceed and go as far as the money would reach.

Dr. W. MacNab Miller of Columbia, was invited to assist us, to which he very graciously assented, spending two days with us going over the county making speeches and delivering addresses at churches and schoolhouses. The attendance at these meetings, considering the novelty of it all, was very gratifying and encouraged us to further effort.

In this, our second campaign, we determined to eclipse our previous attempts by more thorough

advertising and telephoning, each member taking it on himself to cover a certain territory, while our efforts to obtain Dr. Louis C. Boisliniere of St. Louis, as lecturer were happily crowned with success. Again the county court was petitioned for \$100 and again only \$50 was appropriated, although afterwards increased to \$60. Accordingly October 26 and 27 were set aside and the work was divided over these two days as follows:

Monday, 10:30 a. m., Hurdland; 1:30 p. m., Baring; 3:30 p. m., Pleasant Ridge; 7:30 p. m., Edina.

Tuesday, 10 a. m., Novelty; 1:30 p. m., Plevna; 3:30 p. m., Newark; 7:30 p. m., Knox City.

Dr. Boisliniere left St. Louis Sunday afternoon over the Burlington, arriving at Quincy, Ill., at 6:10 p. m., and, after spending the night at Quincy came over on the O. K. railroad to Hurdland, being joined at Edina by the members of the profession of that city.

At Hurdland both Drs. Gray and Humphrey met us at the station and conducted us to the schoolhouse, where a large audience made up of schoolchildren and adults were waiting to hear the doctrines to be propounded to them.

It was evident from the start that Dr. Boisliniere knew how to interest the children as they were "all eyes and ears." These children were made to feel the important position they occupy in the affairs of the world and the duties connected with them.

After this lecture the members journeyed by automobile to Edina for lunch. The day being bright and the atmosphere crisp the ride of seven miles from Hurdland to Edina over good, smooth roads stimulated the appetite sufficiently to make short shift of the fine luncheon prepared at the Hotel Gibbons.

From Edina to Baring by auto takes about thirty minutes. Dr. F. E. Luman was on hand and had gathered the schoolchildren together with the "grown ups" in the large dancing hall. There were at least 250 in the audience, all of them wide-awake and intensely interested in what was told them.

The ride from Baring to Pleasant Ridge covering a distance of twelve miles was unusually exhilarating, owing to the stiff northwest wind which we had to face all the way.

Dr. Boisliniere remarked in his lecture here that as far as fresh air was concerned in the treatment of tuberculosis, Pleasant Ridge was amply supplied. The audience here was especially interested in the subject of the lecture as this little hamlet is a hotbed of tuberculosis, many families having felt the stings and blows of this veritable pest. The little church in which the meeting was held was crowded to its full capacity, and had the weather been more clement it could not have accommodated the crowd.

From here back to Edina was a long and chilly ride, but immensely enjoyed by the entire party.

The Edina meeting was opened by a short concert given by the Edina Ladies' Band in full uniform. The lecture delivered here was of a more pretentious nature and was well attended and much appreciated.

Early the following morning the party, which filled two autos, made its way toward Novelty. The weather, as on the previous day, was bright and cheery though a little sharp. The Baptist church was filled to capacity with people who by their hearty handshakes manifested their appreciation of our efforts in their behalf.

Drs. Arnett, Sherlock and Owen of Novelty, as well as Dr. J. W. Haden of Plevna, met us here and accompanied us in their cars to Plevna where a bounteous luncheon awaited us.

The attendance at this place was very large and attentive, at least 300 being present. Here we had the pleasure of inspecting a "model schoolhouse," of which there are quite a few in Knox county. Dr. J.

R. Northcutt of Knox City, joined us, having made the trip from his home to Plevna in his own car, driven by himself over some of the worst roads in existence, and from here on helping out the good cause by taking on some passengers for Newark.

Newark, said to be one of the oldest towns in north Missouri and at one time one of the largest slave centers, greeted us with wild acclaim. Not having time to lose, we proceeded at once to attend to business and found a large number of children and adults filling every seat in the hall.

Dinner time brought us to Knox City where everyone in the party did justice to the elegant repast served. At 7 p. m. the last of the lectures was given here to a very large audience in the Christian church. From here Dr. Boisliniere made his way back home to a well-earned rest.

Dr. Boisliniere is deserving of the highest praise for his unselfish devotion to the cause of public health. Everywhere the burden of his song was the necessity of recognizing the fact that tuberculosis is essentially a disease of childhood and of the non-observance of health laws. The Knox County Medical Society feels that it is under great and many obligations to him.

As far as can be determined, this campaign will result in much good to the community and likewise to the profession, since this has brought home to the laity the fact that the medical profession is living up to its traditions in maintaining and improving the health and consequently the welfare of the people.

H. J. JURGENS, M.D., Secretary.

LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society met at Canton, November 18. The president being absent, Vice-President Dr. J. R. Hamlin of LaGrange, presided. The secretary being absent Dr. A. C. Crank of Canton, was chosen secretary *pro tem*.

The election of officers for the ensuing year resulted as follows: Dr. Joseph R. Hamlin, LaGrange, president; Dr. H. E. Dunlop, Canton, vice-president; Dr. Ray Mercer, Canton, secretary.

It was decided to have the next meeting in January, 1915, at Quincy, Ill.

RAY MERCER, M.D., Secretary.

SALINE COUNTY MEDICAL SOCIETY

The Saline County Medical Society met in regular session at Marshall at 2:30 p. m. in the office of Drs. Harris and Hardin. Dr. Tuttle being absent, Dr. John R. Hall presided.

Following the reading and approval of the minutes of the meeting of July 24, Dr. L. S. James read an interesting and instructive paper on "Placenta Praevia," reporting a case. A general discussion followed the reading of the paper with report of cases by Drs. Harrison, J. R. Hall and J. R. Hall, Jr.

Professor Sewall of Missouri Valley College, was present and announced that he was prepared to do microscopical work for the medical profession.

Dr. John R. Hall, Jr., of Napton, according to previous instructions by the society, delivered the Saline County Medical Society constitution and by-laws to the secretary for distribution among the members.

Dr. F. A. Howard reported the results of infection with diphtheria of fifteen children in the Slater schools, showing some diseased conditions of the nasal passages in ten children.

On motion by Dr. Anderson, the society voted to go on record as favoring medical inspection of school-children.

On motion the society adjourned to meet Dec. 8, 1914.

Program: Diphtheria Sequelae by Dr. A. F. Howard. A. F. BROWN, M.D., Acting Secretary.

WRIGHT COUNTY MEDICAL SOCIETY

The Wright County Medical Society, after a sumptuous dinner at the Meyer Hotel, Mountain Grove, Nov. 12, 1914, assembled in the office of Dr. D. W. McGee. The meeting was called to order by the president, Dr. R. M. Rogers of Mansfield.

The society had the honor of having with them the president of the State Medical Association, Dr. H. C. Shuttee of West Plains. Dr. Shuttee favored the society with a lecture entitled "Medical Ethics." The doctor's remarks reminded the members of many of their short failings and stimulated a more brotherly feeling among the physicians. It made them feel that a medical society was worth something to them.

The Wright County Medical Society was organized in August, 1913, and the attendance and membership has increased with each meeting.

The following members and visitors were present: Drs. R. M. Robers, J. A. Fuson, Mansfield; Dr. A. J. Farmer, Hartville; Drs. A. H. Ryan and L. T. Vanoy, Norwood; Drs. J. A. Peyton, A. C. Ames, D. W. McGee, E. C. Wittwer and E. J. Butzke, Mountain Grove. The visitors were Dr. Shuttee, West Plains; Dr. J. M. Hubbard, Mountain Grove, and Dr. J. B. Little, Norwood.

Dr. Edward C. Wittwer read a paper entitled "Fractures of Lower Limbs and Their Treatment." This paper was well prepared and contained a great deal of good advice in regard to diagnosis and treatment of fractures. All the physicians present manifested much interest in the subject by telling of their successes and failures in treating fractures and many questions were asked in this connection.

Mr. E. J. Green, cashier of the First National bank and a former druggist of West Plains, was present at part of the session. He favored the society with a short talk advising physicians to pay more attention to sending out statements and looking after the business part of the medical profession as well as the regular professional work. It would be helpful to keep the doctors' accounts looking much better in the bank. Probably the bank clerks would save some red ink!

Dr. A. C. Ames presented a clinical case of exstrophy of the bladder, a boy aged 3. The opening was midway between the umbilicus and the pubes. The genital organs were present (male). This case was of great interest and the doctors, after careful examination and discussion, advised further surgical methods for relief of the condition.

Dr. R. M. Rogers, having proved himself able to organize a medical society and to keep up continued enthusiasm and growth in the society, was reelected president for the ensuing year by acclamation.

The society then moved to suspend the rules and choose all the officers by acclamation. The motion carried and the following officers were chosen: President, R. M. Rogers, Mansfield; vice-president, R. A. Ryan, Norwood; secretary-treasurer, E. J. Butzke, Mountain Grove; delegate, Edward C. Wittwer, Mountain Grove; alternate, L. T. Vanoy, Norwood; censor, A. J. Farmer, Hartville; committee for soliciting new members, J. A. Peyton, R. A. Ryan and J. A. Fuson.

There being no further business, Dr. Ryan made a motion to adjourn until the next regular meeting, which is to be held at Mansfield the first Thursday in February, 1915. The motion was seconded by Dr. Fuson and carried.

E. J. BUTZKE, M.D., Secretary.

THE TRUTH ABOUT MEDICINES

NEW AND NONOFFICIAL REMEDIES

Since publication of New and Nonofficial Remedies, 1914, 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":

SLEE'S NORMAL HORSE SERUM.—Marketed in vials containing 100 Cc. Abbott Alkaloidal Company, Chicago.

DIPHTHERIA ANTITOXIN.—Marketed in packages of 10,000 units ready for use. Memorial Institute for Infectious Diseases, Chicago.

CONCENTRATED DIPHTHERIC ANTITOXIN.—Marketed in syringe packages containing from 500 to 7,500 units. F. Stearns & Co., Detroit, Mich.

BACILLUS COLI COMMUNIS VACCINE.—Marketed in boxes of 6 ampoules. E. R. Squibb & Sons, New York City.

STAPHYLO-ACNE VACCINE.—Marketed in boxes of 6 ampoules. E. R. Squibb & Sons, New York City (*Jour. A. M. A.*, Nov. 14, 1914, p. 1763).

PYOCYANEUS VACCINE.—Marketed in boxes of 6 ampoules. E. R. Squibb & Sons, New York City.

STREPTOCOCCUS VACCINE.—Marketed in boxes of 6 ampoules. E. R. Squibb & Sons, New York City.

FRIABLE TABLETS OF EMETINE HYDROCHLORIDE, MULFORD.—Each tablet contains emetine hydrochloride 0.032 gm. H. K. Mulford Co., Philadelphia, Pa.

ANTIRABIC VACCINE.—Consisting of eighteen doses, one dose is sent by mail daily. Pasteur Institute of St. Louis, St. Louis, Mo.

TYPHOID VACCINE, IMMUNIZING.—Marketed in packages of three syringes and in packages of 3 ampoules. H. M. Alexander & Co., Marietta, Pa. (*Jour. A. M. A.*, Nov. 28, 1914, p. 1953).

PROPAGANDA FOR REFORM

ECKMAN'S ALTERATIVE.—Eckman's Alterative is a "consumption cure" patent medicine consisting essentially of alcohol, calcium chlorid and cloves. Now the Eckman concern is running a series of advertisements in which medical writings on the use of calcium in tuberculosis are twisted into recommendations for the nostrum (*Jour. A. M. A.*, Nov. 7, 1914, p. 1686).

THE FRIEDMANN TREATMENT.—An investigation made by the U. S. Public Health Service of the validity of the claims made for the Friedmann treatment of tuberculosis is a complete refutation of Dr. Friedmann's claims, not only as to having developed a specific cure for tuberculosis but also as regards the harmlessness of the treatment. The report of the investigation shows the flimsy evidence on which the Friedmann method for the treatment of tuberculosis was based (*Jour. A. M. A.*, Nov. 7, 1914, p. 1673 and 1690).

THE ACTION OF IODIDS ON BLOOD VESSELS AND HEART.—The iodids, especially potassium iodid, have been credited with having a blood-pressure lowering action and have been used extensively in the treatment of arteriosclerosis. D. I. Macht has demonstrated that the iodid ion, instead of depressing the heart and vessels, has a marked stimulating action and that if potassium iodid lowers blood-pressure it must be the effect of the potassium part of the compound (*Jour. A. M. A.*, Nov. 14, 1914, p. 1767).

AGAR-LAC.—Agar-lac, sold by E. Fougere & Co., is stated to be composed of "Agar-Agar with lactic

ferments, gr. $4\frac{1}{2}$, phenolphthalein, gr. $\frac{1}{2}$." Regarding the "lactic ferment," the expert of the Council on Pharmacy and Chemistry reported that *Bacillus bulgaricus* were present in small numbers only and that there were at least two other bacteria present. The council refused recognition to Agar-lac because its composition is not correctly declared, because it is exploited in a way to cause laymen to use it to their detriment, because unwarranted therapeutic claims are made for it, because its name does not indicate the most potent constituent, phenolphthalein, and because the use of a ready-made combination of cathartic drugs with lactic acid ferments is unscientific (*Jour. A. M. A.*, Nov. 14, 1914, p. 1777).

ASEPTICONES.—Asepticones, sold by the Chinosol Company, are vaginal suppositories stated to contain salicylic acid, boric acid, quinin and chinosol. On the basis of the evidence submitted the Council on Pharmacy and Chemistry voted that Asepticones be refused recognition because unwarranted and misleading therapeutic claims are made; because the name does not indicate the potent constituents and because it was considered an unscientific shotgun mixture (*Jour. A. M. A.*, Nov. 14, 1914, p. 1778).

BACILLICIDE.—Bacillicide, sold by the Prophylol Products Company, Richmond, Va., is an unscientific solution of the Glyco-Thymoline type. It was refused recognition by the Council on Pharmacy and Chemistry because its composition is secret, because unwarranted and exaggerated claims are made for it and because the use of complex mixtures of uncertain composition is unscientific and contrary to the best interests of the public (*Jour. A. M. A.*, Nov. 14, 1914, p. 1778).

IRON SOLUTION FOR INTRAVENOUS THERAPY.—This solution, manufactured by Perkins & Ross, Colorado Springs, Colo., contains soluble iron phosphate as its essential constituent and is recommended as a "chalybeate, emmenagogue and tonic." As the intravenous administration of a drug like iron, which must be continued for long periods, cannot be considered the method of choice, as the composition of the solution is such that changes may occur on standing, etc., which would make the preparation dangerous, and as the method of marketing the solution does not insure its sterility, further increasing the danger of its use, the product was refused recognition by the Council on Pharmacy and Chemistry (*Jour. A. M. A.*, Nov. 14, 1914, p. 1778).

MAIGNEN ANTISEPTIC POWDER.—This powder, exploited by the Maignen Institute, Philadelphia, is stated to be composed of calcium hydroxid, sodium carbonate, aluminum sulphate and boric acid and its action depends on the sodium hydroxid which forms when the powder is treated with water. It is advertised both to physicians and the public by means of claims which are extravagant, preposterous and dangerous. Thus a pamphlet gives directions for the sterilization of the nose, throat, stomach, lungs, eyes, gums, mouth and the genito-urinary tract. Its use is claimed to prevent blood poisoning, lockjaw, hydrophobia and infectious diseases and mothers are invited to treat their babies' ailments with it (*Jour. A. M. A.*, Nov. 14, 1914, p. 1778).

RADIUM EMANATION ACTIVATORS.—Outfits for charging drinking water with radium emanation are now widely and extravagantly exploited. For an apparatus which imparts 2,500 mache units to water each day as much as \$200 is asked. Theoretically, seventy-two cents worth of radium can produce 2,500 mache units of emanation per day. Even if, because of mechanical difficulties twenty times as much radium were required to be present in the activator, the cost of the radium in this \$200 apparatus would be only \$14.40 (*Jour. A. M. A.*, Nov. 14, 1914, p. 1780).

LYSOFORM.—Lysoform and Crude Lysoform, made by the Lysoform Gesellschaft, Berlin, Germany, are solutions of potash-soap stated to contain respectively 6-7 and 10 per cent. of formaldehyde. These preparations were refused recognition by the Council on Pharmacy and Chemistry because unwarranted claims were made in regard to their efficiency and because their indiscriminate use for the treatment of diseases was recommended (*Jour. A. M. A.*, Nov. 21, 1914, p. 1870).

PHECOLATES, PHECOLAX, PHECOZYMES AND PHECOTONES.—These are tablets put out by F. Waldo Whitney designed to form part of a system of treatment founded on the theory of autotoxemia. The different mixtures consist in the main of well-known remedies, one of them containing ten constituents. Most extravagant claims are made for these mixtures. The Council on Pharmacy and Chemistry voted to refuse them recognition as unscientific shotgun mixtures and because the names do not indicate their potent constituents (*Jour. A. M. A.*, Nov. 21, 1914, p. 1870).

SERUM VACCINE, BRUSCHETTINI.—This vaccine, sold by R. G. Berlingieri, New York, has for its aim the destruction of the tubercular cell and the facilitation of its elimination by the natural expulsive processes. The manufacturer not having submitted proof of the value of the preparation, the Council on Pharmacy and Chemistry voted that it be refused recognition. Later, information was received that the preparation was now used only in slight cases (*Jour. A. M. A.*, Nov. 14, 1914, p. 1870).

SHERMAN'S NON-VIRULENT TUBERCLE VACCINE.—This product of G. H. Sherman, Detroit, was refused recognition by the Council on Pharmacy and Chemistry because the far-reaching claims made for it were not substantiated by suitable evidence (*Jour. A. M. A.*, Nov. 21, 1914, p. 1870).

WHITE SULPHUR SALTS.—This is an effervescing salt put on the market by the White Sulphur Springs, Inc. It was refused recognition by the Council on Pharmacy and Chemistry because it did not represent the water of White Sulphur Springs, Va., as claimed (*Jour. A. M. A.*, Nov. 21, 1914, p. 1870).

UNGUENTUM SELENIO VANADIC, v. ROEMER.—This ointment, marketed by Schering & Glatz, New York, is claimed to contain selenium oxycyanid and vanadium chlorid. No evidence of the value of the preparation either in carcinoma or in any of the very long list of other diseases in which it is recommended was submitted. The pharmacologic evidence that such a preparation would be of value in such conditions being practically nil, the Council on Pharmacy and Chemistry refused recognition to the product (*Jour. A. M. A.*, Nov. 21, 1914, p. 1870).

IODIA.—Iodia (Battelle & Co.) is claimed to contain potassium iodid in combination with iron phosphate and vegetable "principles." It is extravagantly recommended for use in many and varied conditions. It is asserted to be "almost a specific" in eczema and rheumatism and "a highly efficient form of iodine." The A. M. A. Chemical Laboratory having shown that untrue statements in regard to the composition and preparation are being made, the Council on Pharmacy and Chemistry refused recognition to Iodia on this account; because unwarranted therapeutic claims were made and because the use of this complex mixture is unscientific and a detriment to the profession and the public (*Jour. A. M. A.*, Nov. 21, 1914, p. 1871).

NARCOPHIN.—Narcophin consists of morphin meconate and narcotin meconate in molecular proportions. It is claimed to be a scientific substitute for opium and to have advantages over morphin. The Council on Pharmacy and Chemistry was unable to accept the therapeutic claims made for it (*Jour. A. M. A.*, Nov. 21, 1914, p. 1872).

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